

ROSE ATOLL

EXPEDITION I: 5-15 NOVEMBER 1980

II: 1 - OCTOBER 1982

BALAZS

1980 - 84

G.H. BALAZS

ROSE ATOLL - I - (NUU MANU)  
(5-15 NOV 1980)

ON ROSE - EXP. I <sup>th</sup> 12<sup>th</sup>  
11 AM 10 NOVEMBER 10-11-12<sup>th</sup>  
TO MONITORING  
3:30 PM 13 NOVEMBER 1980  
EXP. II  
5-11 Oct 82

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TURTLE & TRACK OBSERVATIONS . . . . .  
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J. LUDWIG TAGGING - NOV 81 . . . . . p. 108



COMPOSITION BOOK

9 3/4 IN. x 7 1/2 IN. (24.8 cm x 19 cm)

AVAILABLE AS:

- No. 09-9130 (1130) 60 SHEETS COLLEGE RULED & MARGIN
- No. 09-9132 (1130-P) 60 SHEETS COLLEGE RULED & MARGIN
- No. 09-9134 (1143-X) 100 SHEETS COLLEGE RULED & MARGIN
- No. 09-9132 (1130-P) NUMBERED PAGES

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VERNON McMILLAN, Inc., ELIZABETH, N.J. 07208

22-26 Oct 1984 Dick WASS TAGGING  
AT ROSE ATOLL . . . . . p. 119

6901-6908 sent to Ray Buckley, Pago Pago  
office of Marine Resources

MISCELLANEOUS BACKNOTES RELATING TO SAMOA :

Terry FERSTLE

P.O. Box 3620

PAGO 96799

688-7880

Harry Barnette Hill (1977)

Thesis on fishing

32,000 of which 12,100 registered aliens

(10,500 w. Samoa

1,100 Togans

500 - 24 other countries)

Homotrema; Family Homotremidae (Protozoa)

John Pyke - TUELE Petroglyph

Paul Bartlett - Soil Cons. Ser.

Tau 8/81 White Sand Beach

near Tau Village; 2 tracks

"TOFI" Another Sand beach on east end  
guide from Fituta Village

Drue  
Tavuki  
Kadavu  
Fiji Island  
4th August, 1986.

Write Mimb,  
University,  
Hawaii.

Dear Sir,

I am so grateful ~~that~~<sup>to</sup> write to you  
that we had caught a turtle. Two stamps or  
a pin was pinned on both of its arms.

It was such a big turtle. One of  
the pins number ~~was~~<sup>is</sup> 3504 and another  
one ~~was~~<sup>is</sup> number 3505.

We had got the pin or a stamp  
which may ever you would call. ~~base~~ If you  
would like a pin we would be grateful to  
send it over.

3504 LFL; 3505 RFL  
11/10/80

Your sincerely  
Alanieta Numatasere

OCL-111cm photos  
ROSE IS., AM. SAMOA

Drue  
Tawalei  
Kadavu  
29.9.86

Mr G. Balazs,  
National Marine Fisheries Service  
2570 Dole St.,  
Honolulu.

Dear Sir,

We received your letter dated Sept, 5, 1986 on the 14th of this month and have been unable to answer it sooner, I ~~am~~ hope that you will forgive us for it.

Referring to the questions which you want answered is this:-

- 1) The turtle was caught by net.
- 2) It was in good health and did not show signs sickness, disease or injury.
- 3) We have caught a lot of turtles in the same area where this one was caught as it is a feeding ground for turtles.
- 4) The turtle was butchered for eating, it had seaweed and small fishes in its stomach.
- 5) We have not heard of anyone so far in Kadavu catching a turtle with a tag on it.

I hope Sir that you are satisfied with the answers that I have told you concerning the tagged turtles which you said that was caught and tagged in Pasa Pasa on the 10th.

of November 1980. We have caught hundreds of turtles along our sea shore as it is a feeding ground for them, but this is the first one with a tag on it. So far, but if we do hear of anyone catching another turtle with a tag we will inform you of it.

Mr Balazs, I would like you to know that the writer of the first letter no longer resides in Kadavu, but you can post it to her father as it was he who caught the turtle, and his name is VONIANI NIUMATASERE with the same address, so until we hear from you and anxiously looking forward to the colour booklet and poster of different kinds of sea turtles as we our fishermen here in Drue, Kadavu.

Sincerely,

Voniani Niumatase.

VONIANI NIUMATASERE.

DRUE

TAVUKI

KADAVU.

Fiji.

## - Rose Atoll - need list -

- Seasick Pills
- Star Scope(?)
- Film
- Skin Diving
- Dehydrated food packets
- CB? channel 16?
- Tide Table, Moon Phase
- Maps - NOAA & Rob's drawing
- Reference file
- Photos of turtles (BW's)
- Luggage → ① Backpack ② <sup>Small</sup> Gray suitcase ③ Tentroll/canvas/sleeping bag
- ④ white buckets <sup>3</sup> or more
- White zipper bag / <sup>Plastic</sup> Camera Bag?
- Binoculars
- Dehydrated food packets
- RAIN JACKET NOT TAKEN!

- long-handled shave
- <sup>clean</sup> Canvas for catchmen
- Medical First Aid
- Purification pills

## Safety list

FLOAT PLAN - USCG

AIR MATTRESS

Strobe

Flare

Transmitter EPIRB

hood

Tabis

fins?

Water - food

CB?

5 November 1980

WEDNESDAY

Depart Honolulu via Continental Airline  
~5:30 AM. Aborted takeoff and was  
delayed for ~ one hour.

Arrived in Pago Pago at ~10:30 AM,  
one hour behind Honolulu time.

#8 taxis to Rainmaker Hotel,  
check in to #30 night room.

Herbst and Kosaka are in Western Samoa  
6 November Breakfast with Rob Shallenberger.

Thursday Saw Tony Brown.

Visited J with William Pedro and  
Henry Sessapasara. Also saw Roger  
Pfulm. Henry mentioned case  
of <sup>large</sup> turtle poisoning (near Anuu?)  
possibly hawksbill when he was  
young. Lots of people got sick - some  
may have died.

Also, that in recent years  
he has some across 10 turtles  
all hawksbills in the market.  
Most were released. Also, 3 hatchling  
hawksbill were brought from Manua  
Group.

Two or three of the hawksbills in  
the marketplace may have been rotch-marked.  
Old subadult green turtle shell



6 November  
Thursday

noted for sale in gift shop at  
rainmaker. Also, about 7 old  
green shells decorating bar.

Called NMFS Honolulu to have fatteries  
for starscope sent down with Dick  
Wass. AA  
Mercury

Inspected Sailani - fiberglass ~40' with 4-71.  
Brought from Seattle via HILO.

Rented a car (#20 + .12 mile) with  
Rob and drove to extreme west  
end of island.

Dinner at Soli's Restaurant.

7 November 1980

FRIDAY

Meeting with Consulate Park of Korea  
concerning restrictions of Rose Atoll.  
100 logliners in fleet - each fish  
for 3-4 months. Currently not fishing in  
Hamp's 200 mile zone. <sup>12 mile "no fishing" around</sup>  
Rose - gather logliners B.  
Billfish regs are in effect for this area.

<sup>with Rob</sup>  
Drove around searching for a raincoat - none  
found. Rain.

At 12 noon had lunch at Soli's with  
Taiwan Consulate and Lt. Perkins USCG.

Robert Hsiao - 90 logliners  
(see business card on page)

7 November 1980

FRIDAY

Perkins mentioned that American Samoa Dive Club exists - President Dr. Don Lagron, Pediatrician. Vice President Terry Flörschel recently saw Tongans catching turtles - inquired about the legality to Lt. Perkins.

Bus with bad brakes ran into the back of our car -

At 1:30 PM we had a TV news interview concerning the trip to Rose Atoll.

Returned to Marine Resources office, <sup>with gear for boat</sup> where Roger drove me to Korean house to look for rain gear. - too expensive - cheap quality.

Walked from Marine Resources towards town looking in stores -

Bought some small food items at Burns Philip (upstairs). noted 2 juvenile hawk shells, 1 subadult green, and 2 adult shells hanging on wall for sale, \$1.25.

Most not polished. Also many ~~wood~~ boxes of sawpsill earrings - \$1.75 - nice quality.

Informed that shells are imported from Tonga (need to write good check with Fishery Department). "Personnel" lady with Burns Philip said U.S. people might have trouble taking them in, but most

CITES?

7 November 1980

Friday

have ways to avoid this. Residents pack shells with household goods. "Certain Federal laws don't apply in American Samoa" but "they are tightening down on turtles".

Earlier Roger had mentioned to me that one of the turtles confiscated in market was a green. Also, he has recently seen two juveniles (pauks?) being sold along the road at fish stands. Roger sees turtles in front of his house, just outside the reef.

Henry told of college student in Honolulu that wanted his "pet turtle" brought from Samoa - raised by tethering.

I purchased carved wooden turtle at "Samoan Handicrafts" \$9.00. Some hawksbill carvings on sale here too. Carver's name - Willy Roberts

Purse seiner "White Star" was at fuel dock - talked to John Debeer's, Cannery agent - previously worked on tuna-porpoise problem at Hojolla - has seen many turtles off South America - Seiner has been in "W. Pacific" PTDF charter - 20 tons fish to cannery -

7 November 1980

FRIDAY

only tuna is packed at cannery - Swordfish, Marlin etc shipped frozen to Japan.  
 Heard of turtles in purse seine is that they can fall on crew members when hauling the net aboard.

x

Longliner fleet in Pago apparently provides no fish or food for Korea and Taiwan - only money.

Had special dinner at Hotel.

8 November 1980

SATURDAY

Went to market, but only saw vegetables in square.  
 Frozen fish, mostly baracuda, but some Mahi Mahi, being sold from small boat obtained from longliners at cannery - reported that they trade banana and liquor for shark-bitten and certain undesirable species that are not sold to Japan, and not canned.

Meeting at Henry's office about 9:15 AM, with Dick Massie.  
 He indicated that Refuge was

8 November 1980

SATURDAY established to protect birds and turtles.  
Lagoon area should be used because:

- 1.) limited resources available for development of this Pacific area
- 2.) taking clams wouldn't impact birds and turtles.

one boat taking clams would probably reduce legal (large) size quickly. How much economic benefit could there be from one boat fishing?

Rob, Dezal, and I drove to East end of island - saw Anini, and harbor being constructed on both sides - Corps project.

Drove down to the village of Aoa - new blacktopped road is almost completed.

Talked to former Peace Corps people from Western Samoa - married to Samoan women. Indicated that a turtle nesting had occurred on a beach on Savaii, where none had ever been known before.

Also, that Tongans in American Samoa are good free divers - go in groups along reef and clean out everything. Also use chlorop.

Agent has recently been hired for Sea Grant Advisory program - reportedly not qualified - a welder. Pay \$15-18,000 year (?)

8 November 1980  
Saturday

Photos taken, at request  
of the following: (16 years of age)

Lauao Ioane

P.O. Box 3317

Aoa, Pago Pago

Am. Samoa 96799

&

Flora Fagasan

P.O. Box 3751

Airport

Am. Samoa 96799

Drove back to Pago Pago - visited  
with Lt. Doug Perkins at his  
house.

Talked to Dive club VP Tel. 688-7880

Terry Ferstle

P.O. Box 3620 - 96799

concerning sightings of turtles.

No special site of concentration.

See ~ 1-2 on each dive. - sleeping on  
bottom

Torgans are taking turtles.

I will send the club turtle  
report forms and literature.

8 November 1980  
Saturday

Jerral mentioned that Roger <sup>(Pflum)</sup> had said that Rose refuge is probably illegal because no public hearings were held.

Considers that 200 mile jurisdiction fishery management plans for Pacific island nations should all include a provision to report accidental capture of turtles, as well as marine mammals.

Dinner at Hotel steak of your choice.  
Called Finrod Christian -

9 November 1980

SUNDAY

After breakfast (~8 AM) we transferred food supplies to the boat.

I talked to 3 crew members of Purse Seiner White Star - They report:

- 1.) catching 700 tons of tuna and skipjack - (capacity of boat is 1000 tons) - delivered it to cannery;
- 2.) when sun is high and water is clear, seine doesn't work - fish dive under the net;

9 November 1980

SUNDAY

"OR on  
foamers"  
(fish schools  
foaming at the  
surface)

- 3.) Successful by setting on logs at night, or in dirty water.
- 4.) No turtles seen, unlike off the coast of South America;
- 5.) other seiners will be fishing in the Western Pacific and bringing fish to Pago cannery.

Depart 2:30 PM on Leilani Soy Rosey Atoll. Calm sea, light wind. By 6 PM we were well to the east of Tutuila (and Anuu). While passing close to Anuu, I noted white sand beaches fringing this small, uninhabited offshore island. Small boat harbors are being constructed to provide easy access.

Hard rains occurred during the night as we approached Tau in the Manua Group. Surprise was at ~ 5:30 AM - at which time we were <sup>well</sup> past Tau - not visible. Rose was finally sighted at ~ 10:30 AM steering



10 November 1980

Monday

85°

Saw Porpoise off bow.

Motor along reef to pass. Water rushing out rapidly - too strong for Keilani, to enter. Rented 14' Zodiac, entered pass on the right side, and land on Rose Island at ~ 11:50 AM. Photos of island.

Sighted two adult greens in deep water outside pass while still on Keilani. Also, note that Wally Johnson second "pass" for small boat, but found that waves were breaking at this site. Noted that Salt Is. is crescent shaped and has FW's "goose" sign (does not say that fine or imprisonment exists for "Trespassing"). Also doesn't say anything about lagoon waters.

From ~ 12 - 12:30 PM I walked around Rose Island making a cursory inspection. Vegetation is very thick - lush; mostly Messerschmidia and Pisonia. Boerhaavia ground cover, but looks different than as it occurs in the Seehaus. Very little beach litter - trash noted. Large wooden Refuge sign is overgrown by Messerschmidia. Other old, but unreadable, signs also present - apparently saying no trespassing. Palm trees with snuts present (source of water and food). Also, concrete marked turned on its side.

IN most  
AREAS - RIGHT  
To Shoreline.

10 NOVEMBER 1980

MONDAY

Some tracks and pits noted. Pits in most cases are under Messerschmitti. Substrate at surface is rubble (coralline algae and some regular coral) up to fist size. When scraped away, and dug down, a finer consistency exists. In many areas exposed to direct sun, the surface rubble is <sup>from blue-green algae</sup> gray ("burned" appearance as seen in other Pacific island areas <sup>Phoenix</sup>). White (cream colored), and finer consistency exists underneath. However, there are several different habitat nesting areas on the island.

Many of the nesting areas do not form deep pits - only moderate surface disturbance. But these appear to contain eggs (be "good" pits) due to covered up (long trail) appearance. Side of island (west side) facing fringing reef has shallow, beach rock along coastline - slabs and some boulders close to shore. However sandy patches exist where some turtles have crawled ashore and skited coastline digging pits. In some areas, pits have been dug well into the interior of island. Censusing of pits

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 MONDAY

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ROSE ATOLL -

FORMIDABLE NAVIGATION PROBLEM

for turtle - depending, of course, on where they are coming from.

19

10 NOVEMBER  
MONDAY

is therefore very difficult. Aerial surveys for pits would be worthless for this island. Aerial for tracks would be worthwhile, if conducted at ebb of series of decreasing tides. Aerials for turtles in lagoon would be meaningful.

<sup>1 reef flat</sup>  
Fringing reef has boulders all along it. At low tide I walked out to photograph rose-pink where waves break. Noted clams right in shallow water.

Found corrie shell - dead but shiny. Will collect various kinds of coralline algae for ID by Dennis Russell.

Noted a few ghost crab holes along shoreline.

At low tide, the water surrounding the island is very shallow - in nearly all areas turtles could not get to island without crawling on reef flat. I doubt if they would, as this is very rugged and sharp.

on second walk around the island, I attempted to record the number of pits easily seen from coast - as well as visible tracks - all tracks probably represented the last 10 days - no longer.

\*  
Need to  
compile  
ID list  
in this book

10 November 1980  
MONDAY

Tracks - North Point (metal sign) to center of island (east side) at wooden sign: 3  
 Wooden sign to beginning of beachrock (Southwest side): 3  
 Beachrock to metal sign: 4

10

Only ~ 40 pits recorded (of those ~ 10 estimated good)

Most of these pits were at the north end.

However, note that shallow digs can probably obscure rapidly. Also I did not walk back into vegetation to get counts (would be very difficult).

During the afternoon I went diving with Dick Wass, William Pedro and Ernie Kosaka for about 2 hours. We stopped at "corners" and quarters of Atoll - counted all clams that could be seen during 5 minutes. Pockets of water are very warm. Some coral heads have scores (40-50) of clams, while other adjacent ones have none. Coral cover is very thick - beautiful. Syngnatus (?) laga noted - also Padina & Haliotis.

10 NOVEMBER 1980

MONDAY Some Black-tipped sharks up to 4' seen - but they were not aggressive. Fish populations very abundant. William speared some for dinner.

|| Juvenile <sup>-17"</sup> green turtle seen during dive at southern corner.

Had fried reef-fish for dinner, with rice and boiled green bananas.

At ~ 8 PM I started surveying coastline for nesting turtles - used Stetoscope (Night Surveillance device) - works good gross sightings of turtles - but does not seem suited for viewing detail.

Noted green ashore (digging egg chamber at ~ 8:35 PM. Only a shallow body pit excavated. In same general area, another turtle returned rapidly at ~ 8:45 PM.

Had been nesting under Messerschmidi and not observed. Possibly disturbed by our (Rob & I) presence(?)

Turtle under observation with scope abandoned pit at 8:55 PM and started heading for water. Tags 3502 LFL and 3503 RFL applied with very little difficulty - minor response.

Continued along beach and found a third green turtle excavating egg

~ SITE A  
Not Tagged →

"SITE A"  
ON MAP  
P106

✓  
Logged

10 November 1980

MONDAY

SITE B

chamber in area with only low  
Bohaeria and Portulaca vegetation.  
Turtle partially under Messerschmidia.  
When egg laying started, I took a  
number of photos with flash. Rob also  
Tags 3504 LFL and 3505 RFL applied  
with no difficulty.

Curved carapace length - 111 cm  
Carapace is mottled olive-greenish  
and black - former seems to predominate  
but I need to examine photos.  
Skin on underside of flippers, flap  
and neck seems very soft and  
smooth. Head and flippers seem  
to have yellow and brown mottled  
areas. Carapace and skin seem  
very clean of fouling organisms,  
with the exception that some  
red alga may be present on the  
underside of neck. Carapace has  
only a few scratches along the  
dorsum.

Need  
Stomach  
Analysis  
Results

Helped Rob read masked Boobie  
tag 757-66867

During the day, Rob shot ~15 rats, all

10 November 1980  
Monday

exulans. A few stomachs examined, but only black paste found, according to Rob. J

During nighttime walk-around surveys, I noted four potential predators:

- 1) large red hermit crabs, in thin walled shell - mostly at north end of island - not present in great numbers - counts needed. 1a.) Brown & Smooth hermit crabs also seen. (later learned to be young coconut crabs)
- 2) Two species of ghost crabs - laevis and ceratophalmis - not in great numbers
- 3) Grapsus crabs, up high, along west "beach rock" shoreline
- 4) Rats

Also present: Black-tipped sharks;  
(white & grey) Reef Herons; Frigates.

Returned to photograph 3504,05 at 10:30-11 PM. She had covered for after 15 feet - curved to the left.

CURVE  
DIFFERENTIALLY  
N2 S  
OF THE  
EQUATOR

No other turtles up this PM-AM.  
Lower tide probably prohibits entries to island.



10 NOVEMBER 1980  
MONDAY

Why didn't I dig in this area?

(Kosaka noted (old?) eggs shells  
by composite. No dead, dried  
hatchlings have been found. Unable  
to locate hatched remains at sites  
I have excavated, - however lots of  
soil slippage while digging with  
shovel.

Note, that <sup>single narrow</sup> pass provides some  
protection against human intrusions.  
Strong current most of the time.

Location of <sup>Refuge</sup> signs, and wording, needs  
to be altered.

Need to make algae collections, both  
fleshy and stony (reef building).

Noted thick, black jungle backdrop -  
probably a great aid to hatchlings  
and returning nesting turtles.

Note that <sup>or are they</sup> no remains of hatchlings  
eaten by rats? turtles have been seen in the  
interior.

11 November 80

TUESDAY

Up about 6:30 AM - Dick and William dropped me off on Sand Is. at ~ 7:30 AM. Brown Noddys on eggs and with chicks (light phase) - photos taken. Also, a flock of Sootys ~ 500, but apparently no eggs or young.

Sand Is. has fewer potential predators for hatchlings - only noted a few ghost crab holes. Located closer to pass for rapid departure by hatchlings. Noted 5 digs - pits that may have occurred within the past 10 days.

\* Counted ~ 150 older pits, but it is virtually impossible to tell just how old they are, or which ones contain eggs. Also, redigging may have obscured some pits. Substrate is coarse at the surface, but finer underneath.

Noted "red" <sup>homotremas</sup> spots on white calcareous pieces. Closeness of Sand Is. to pass offers easier access by adults - I doubt if entrance to Atoll can be obtained by adult turtles by any other route except pass. However, reef goes bear around most of Sand Is. at lower tide.

Access for tagging at Sand can be

HAVE TAMOTSU draw map of ROSE  
(OR USE FWS one)

11 November 1980

TUESDAY obtained from Rose by walking reef flat at low tide.

Noted the tracks of one turtle that was ashore last night! That's all.

Wass and William saw one male turtle while diving in pass - it approached them close, then swam off. Both Islands have highly variable substrate - depending upon location.

Diving during later morning resulted in the sighting of two males by Wass and William.

Wrote notes for ~2 hours - walked beaches & interior, looking for nests with evidence of hatching (eggs) or dried-dead hatchlings. None found!

At ~3:30 PM I walked along exposed reef flat collecting algae and taking photos. Noted that "boulders" showing on reef are really the jagged remains of an ancient elevated reef. Noted that "fringing" reef is very wide. Two forms of pink coralline algae were observed and collected for ID.

[CONTINUED PAGE 31]

OR  
COMMENTED?

- NOTES RELATING TO <sup>anticipated</sup> 1981 breeding season  
Study at Rose Atoll - )

1. Preliminary aerials to check for turtles in and around atoll
2. Long distance radio
3. Interview Manua group fishermen
4. Generator - propane frig
5. Zodiac & motor
6. Container with silica-gel to store cameras
7. Try to establish camp in shaded, tradewind area -  
Awnings needed.
8. Toilet facilities (chair w/seat?)

30

Samoan name for Rose - "NUU MANU"  
 legends(?) Historical use(?)

- SPECIAL FEATURES AND ECOLOGY OF ROSE ATOLL  
 (Read Sachet, ARB 1954)

1. NWR; Islands for Science - Pacific Science Congress  
 and IUCN(?). Coolidge? Linblad Explorer  
 see National Geographic Compare - Cook's Mauvae
2. World's smallest atoll(?); Dominance of red stony Algae  
 Check Vostok - Southern LINES
3. Unexploited (?)
4. Best interest of all ?
5. Very few atolls owned by U.S.
6. "Pink" reef & TOKELAU (also in Gilberts, according to <sup>Jim</sup> Presco)
7. Same year-round turtle nesting, with seasonal peak

11 November 1980

TUESDAY

No channels exist through the reef - all areas of flat examined are alive with coralline algae.

During the late afternoon, Rob shot about ~13 more rats. Only the GI tract was saved for food analysis in Honolulu.

Walked around island at ~10 PM and 11:30 PM, only one up-down set of tracks at north end. Brown and griseus lizards being banded in area where turtle laid eggs on 11/10 Monday night.

At ~midnight, with no moon, I walked into interior of island behind tent to see how much star light penetrates. Virtually nothing to the eye, except overhead between branches.

12 NOVEMBER 1980

WEDNESDAY

(sun up already)  
 UP ~ 6:45 AM. - Walked to north end of island and saw turtle on exposed rubble reef flat. (noted - notch-split present between post-centrals)  
 Tagged it 3506 LFL and 3508 RFL (3507 torn out of RFL with pliers when I fell backward). CGL - 12.5 cm (!)  
 Photos taken Roll 3 - 2 with Williams

12 November 1980

WEDNESDAY

Coloration of this turtle looked the same as the other two that were tagged and observed.

During early afternoon I surveyed interior of island - Lissonia forest.

Noted many broken bird eggs. Also, an elevated coral slab platform at SW end of island - medium size water-worn foundation structure.

Took photos of Lissonia trees with WA, and self-photos by cement marker.

Fell asleep playing in shade and breeze on the beach.

Collected 3 plastic bags of substrate at site where <sup>tag</sup>3504, 05 nested, at ~12-14" depth.

At ~3:30 P.M. I walked out on reef flat, ~1 mile at low tide. Saw deep pools, but no turtles inside.

Took a bath and self-photos. Returned just before sunset.

Night surveys resulted in finding a turtle digging under Messerschmidia at north (Northwest) end of island at ~11:45 P.M. Photos taken on Roll 3.

Tagged 3509 LFL, 3510 RFL

APPROX.  
Between  
sites  
A & B

12 November  
Wednesday

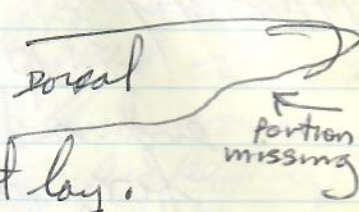
Curved measurement -  $104.1\text{cm} \times 96.5\text{cm}$   
41" x 38"

Right flipper healed injury

sores

Turtle returned to the ocean - did not lay.

portion missing



✓ logged TDPs

Turtle also found digging just to the north of wooden refuge sign - Under Messerschmidt - did not lay eggs -

logged 3511 LFL, 3512 RFL

3514 R 2nd scale

3513 - Bod - retained

Curved - ~~40.9"~~ 40.9" x 38 1/2"

104 cm x 97.8 cm

Li Flipper

↑ healed injury

Once again - noted soft skin and scales - same basic color pattern in carapace. Noted ability of nesting stylites to maneuver with great skill while under Messerschmidt - shelled.

Today William and Dick reported seeing an adult male near channel; Wally Thompson saw two turtles copulating just outside channel.



13 November 1980  
THURSDAY

Up at ~ 7 AM - walked to north end and on around island to check for presters - no new tracks noted.

Departed with Dick and William for Saiba near "Twin Reefs" (to the left of pass). I snorkeled for a short time. William laid a transect line to count clams. He saw a mole green for a short period (approached him and then departed).

Returned to island zodiac, then departed with Ernie, Rob and William to skin dive in lagoon at sites 2 and 1. I collected two dead clam shells and *Symbia* (?) for algae collection. Dick stayed on island to write up notes. Later ~ 12 noon Dick and I took the zodiac to the right of pass, near Sand I. This is the site where 2 gray reef sharks came close to Ernie while he was standing on a coral head.

Dick photographed fish. Also speared a few fish to attract sharks - a few small ones came, but left right away. We then drifted out through the pass clinging to the bottom of the zodiac. Boat

13 November 1980

THURSDAY moved right along. Pass ~~was~~ appeared to be about 70-80' deep, but dropped to ~100-110' just outside. Feilani was anchored in this area. We picked up the three crewmen and returned to island. Photos taken of crew in zodiac as we approached island. (Roll 3).

Started packing gear. Crew ran around planting coconuts. Erapi was here 1955-59 (?) and planted trees. Departed Rose Is. ~ 3:30 PM in last boat. Loaded gear onto Feilani and departed area ~ 4 PM. Calm seas - cloudy overcast; ~ 5 PM our two rubbish bags from island were thrown overboard intact.

Tridacra clams - Samoan "Faisua" or "Faisua" (?). Every so often a few <sup>100</sup> show up in Pogo. Wally claims he gets them in Manua.

Slept in wheel house all night on air mattress. Floor hot from engine.  
Dinner - Canned Chili

14 NOVEMBER 1980

FRIDAY

Tutuila in sight by at least 7 AM.  
Breakfast - beans, boiled eggs, vienna sausage.

Conclusion of clam survey: more research needed, particularly size at reproduction.  
Very few clams were found over 200 mm.

14 NOVEMBER 1980

FRIDAY

Note - most turtle nests on Rose are probably in the shade. <sup>But what is incubation in this shade?</sup> on Sald Island, they are all in the bright sun. (Considers implications of sex ratios).

Crew of Leilani -

VAHA - a Tongan

ERUPI - a ~71-year old Tokelau born in PNG, whose parents were missionaries. Named after boat (a shell?). Came to live in Samoa in 1931. Visited Rose in ~1955-59 for one day in schooner, followed a hurricane. Coconut trees were planted.

Concerning seabirds, Rob mentioned that Polynesian rats (Rattus exulans) coexists with sooty (and burrowing birds) on many Pacific islands.

Arrived in Pago at ~11 AM. Tied up at Marine Resources dock and unloaded. Trucked gear to Rainwater Hotel - Got a room for \$36 for 6 hours to

14 November 1980

FRIDAY

shower and repack gear. Walked to Burns (Philp <sup>South Seas Company</sup>) and photographed carapace of green on sale for \$125.<sup>00</sup> (hawk was described by clerk as "killer turtle"; stated again that shells are from "Tonga")  
General Managers name - Brian Herbert

## NOTES:

- Net fishing occur in Samoa?
- Name of Sea Grant advisor in Samoa?  
FRANK McCoy (L10/82 quit)  
THOMSON
- Wally indicated that lots of turtles nest a Suijains - Questioned Williams earlier comments about few turtles - "He was there long ago"
- \* letter needed to W.T. → Questions - During what months do turtles nest (lay eggs)?
  - How many turtles lay eggs during a one-week period?
  - How many kinds of turtles?
  - Do the people eat both eggs and meat? How many?
  - Tags?

one one occasion, Wally brought a shell from Suijains as a gift for someone in Honolulu. However, he was told at Pago airport that it would be taken away from him in Honolulu (probably not true for that it would constitute interstate movement of a non-commercial nature).  
(But taken illegally)

14 NOVEMBER 1980  
FRIDAY

NOTES, (cont.)

Wally brought feibani from Seattle - 26 days, with only one stop - at Hilo. Must have had lots of extra fuel on deck, if normal running is 8 days maximum, as stated.

Wife - Terri

When asked what month most resting occurs at Rose - answer was May.

Note, however, that Christe Frieberg in letter, stated that resting at Penryhøj is Sept. - ~ Jan. (at  $9^{\circ}$  S, while Rose is  $\sim 14^{\circ}$  S).

\*  
Also  
Similar  
for  
Tbrelaw

Rose latitude is closest to Manihiki or Rarohanga.

Should have taken thermometer to record water and sub surface soil temperatures.

Visited TROPIC ILE SHOPPE in Pago and found hawkbill earrings on sale - \$4.95 - Clerk stated they were from "Western Samoa".

14 November 1980  
FRIDAY

Left hotel about 6 PM and had dinner at Doug Perkins. Discussed 10,000 gal<sup>oil</sup> spill some months ago by Chevron. Hotel and adjacent beaches stink now from decomposition. Also EPA problem of Tuna cannery wastes. Sludge (~85% H<sub>2</sub>O) was dumped in landfill for some days.

Took OMC truck to airport ~ 9:15 PM for Continental Flight 600.

At Airport CURIO shop (left-hand business), I found hawkbill bracelets, earrings, ladies combs on sale. Clerk indicated they were from Fiji. Bob on shelf confirmed this. Right side of CURIO shop (apparently a different owned business) only sells plastic "hawkbill" jewelry. Departed ~ 11:30 PM. Arrived in Honolulu ~ 5:30 AM, 15 November

Discuss - Absence of hatchlings, dead hatchlings

Prepare - Popular article for  
Sea Frontiers -  
Send Query letter & dup. slides

*Robert T. C. Hsiao*

FISHERIES COMMISSIONER IN THE SOUTH PACIFIC AREA  
TAIWAN FISHERIES BUREAU, R. O. C.

P. O. BOX "P"  
PAGO PAGO, TUTUILA  
AMERICAN SAMOA 96799

PHONE: 633-4526  
633-4027



Summary of Hawksbill Jewelry  
SEEN / OCT 1982

"SO. CI. LAOCAGI" Spencers - PCASTIC ASSORTMENTS ONLY  
 SAWYERS 10/20 - Recall Kim's description of couple taping plastic jewelry to body.

1. South Pacific TRADERS -  
(Large department-like store)  
A few pieces of jewelry

2. South Seas Curios  
(Pete's Variety)

10/4 Rings & earrings - W. Samoa [10/15 SAW - RINGS bracelets, hair clips earrings]  
10/4 Bracelets - Fiji

3. Stands set-up by Cruise Ship  
Wide & narrow rings \$3.50 & \$3.00 (W. Samoa)

4. Burns Philp -

Nothing seen in display case

5. Pago Pago Drug Store - EARRINGS ON STATIONARY #5  
Probably made in American Samoa - NEED TO INQUIRE

6. TROPIC ICE SHOPPE - 25 pair earrings at \$6.00

7. RAINMAKER HOTEL (TRANS. PAC. OWNED) - Gift shop  
3-4 pair of local made (?) earrings - \$6 each

8. Samoan Handicrafts - 1 pair earrings - no price

9. Soli & Marks Restaurant: at cash register stand (SON) - ~ 12 pair earrings \$6.50  
\$8.50. Girl stated "made in Fiji". Immediately dropped price from \$8.50 to \$6.

10. "Curio Shop" (left side) - 1) catseye bracelet  
2) earrings @+ ; 3) pendants 4) rings 5) necklace

Difficulties of interpreting findings - &  
earlier cursory reports:  
(see Hirth 1971 FAO)

SPIA - ~~THURSDAY~~ TUES - 5:30 pm  
FLIGHTS SUNDAY

## OCTOBER 1982 CALENDAR

- 1 Oct. - FRIDAY ✓ SPIA arrive 2:30 pm
- 2 Oct. - SATURDAY ✓ Shopping for camping on Rose
- 3 Oct. SUNDAY ✓ Went to church & AUNU
- 4 Oct. MONDAY ✓ Pago library & depart for Rose at 2 pm
- 5 Oct. TUESDAY ✓ ARRIVE Rose 7:30 am
- |                                |             |             |   |
|--------------------------------|-------------|-------------|---|
| ✓ 1 TRACKS, NO NESTERS         | 1420 - 0.1  | *2101 - 2.9 | ① |
|                                | 0301 - 0.0  | 1514 - 0.2  |   |
| ✓ NO TRACKS OR NESTERS         | 0931 - 2.5  | *2157 - 2.8 | ② |
|                                | 0407 - 0.2  | 1623 - 0.4  |   |
| ✓ 2 NESTERS, BOTH TAGGED       | 1034 - 2.4  | *2301 - 2.7 | ③ |
| Sausuimochua DEPART            | 0523 - 0.2  | 1738 - 0.4  |   |
| ✓ 1 up-down TRACKS North point | 1146 - 2.3  |             | ④ |
|                                | *0014 - 2.7 | 1301 - 2.3  |   |
| Sausuimoana BETUAN             | 0639 - 0.2  | 1854 - 0.4  | ⑤ |
| ✓ 1 NESTER NEAR CAMP           | *0127 - 2.7 | 1412 - 2.4  |   |
| DIVE PINNACLES                 | 0747 - 0.1  | 2003 - 0.2  | ⑥ |
| ✓ TC3 against INEW (TC4)       | *0233 - 2.8 | 1513 - 2.6  |   |
| 1 TRACKS                       | 0846 @ 0.1  | 2104 - 0.1  |   |
| leave ROSE ON SSM.             | 0334 - 3.0  | 1606 - 2.8  |   |
| arrive OFU                     | 0939 @ 0.2  | 2154 @ 0.1  |   |
- 12 Oct TUESDAY ✓ DIOSEGA
- 13 Oct WEDNESDAY ✓ LEAVE OFU ARRIVE TAU
- 14 Oct THURSDAY ✓ LEAVE TAU ARRIVE PAGO
- 15 Oct FRIDAY ✓ ARRIVE HONOLULU
- 16 Oct SATURDAY
- 17 Oct SUNDAY

SAUSAU - "Pole fishing"

SAUSAUMOANA - "pole fishing in deep water"

NOTE - Ludwig was ~~lost~~ at Rose in <sup>21</sup> MARCH 1982. AT THAT TIME, Sand Is. had been washed over, and track/pits had been "erased" on Rose from a Feb. Hurricane,

L O  
FR

## Objectives of early October 1982 TRIP.

1. Timing is the result of MONEY BEING AVAILABLE ~~IN~~ IN FY82 Fiscal year - Trip planned many month ago.
2. Few trips have been at this time of the year <sup>(but not so)</sup>
3. FEB. Hurricane that struck TONGA GENERATED WAVES that erased old pits & track on Rose AND SAND ISLETS. ONLY ONE TRACK WHEN JERRY WAS ON ROSE IN 21 MARCH 1982 (~7 months ago).
4. Previous aerial sighting in October of "200" turtles
5. Palolo occur ~~7~~ days after full moon in October - turtles eat Palolo? Palolo occur at Rose
6. Interview and Scout in Manua, Islands  
OBJECT - Collect and write local knowledge and biology of turtles before it disappears from islands with the passing of old people.

RICK DAN  
P.O. Box 311  
DOE  
CZM  
PAGO PAGO,  
Am. Sam

2 October  
8

1 OCTOBER 1982  
FRIDAY

Depart 9am on SPIA 207  
for Pago. w/ Jerry Ludwig, Stan  
and <sup>Hayes</sup> Therese also aboard to  
commercially collect fish. Also Jerry  
Sessafasara returning home from  
a trip. Bill Gilchrist drove  
me to the airport. 5 excess  
bags at \$20 <sup>apiece</sup> each way. Bought Bill's  
breakfast.

Arrive Pago 2:30pm Honolulu time,  
1:30pm Pago time. Worked on  
postage stamp list on the way down.  
Wilhelm Pedro met us with OMR  
truck. Transferred gear OMR office.  
Met with Dick Wass, Henry

Rick DAVIS  
P.O. Box 3140  
DOE  
CZM  
PAGO PAGO,  
Am. Samoa.

and Rick Davis to discuss  
departure on Monday, instead of  
Sunday, due to White Sunday next  
weekend (need pay checks Monday morning).

Checked in to Rainmaker Hotel -  
45.00 double, \$22.50 each

Ate dinner at Hotel Restaurant -  
\$9 + \$1 t.p. octopus dinner.  
Worked on stamp list - went  
to bed ~ 11:30pm.

2 October  
82

Up ~ 7:30am - completed list.

20 Oct 82 Rick picked us up ~ 9 am.  
 SATURDAY Proceeded to shop at various stores. I bought 2-1 gal stove fuel cans (#7) and fuel \$9.00. Ate lunch at Kava Bowling alley \$8.  
 Saw several pieces of turtle jewelry at South Pacific Traders department store. Nothing at Burns Philip.  
 Rick reports that Soyers <sup>Hardware</sup> has lots of jewelry, but possibly plastic. Didn't beat dinner - went to bed ~ 9:30 pm

30 Oct 82 UP ~ 7:30 am - "Pacific Princess" <sup>LOVE BOAT</sup> cruise ship came in to port. Went to Mass at church right in town.  
 Pagolago Saw William at OMR. Found puppy in market. Telephoned Lin & Christian.  
 MET Rick & Sunny at ~ 2:30 pm and we all drove to Aunuu harbor crossing. Saw long lines / wrecks on the beach right next to the road.

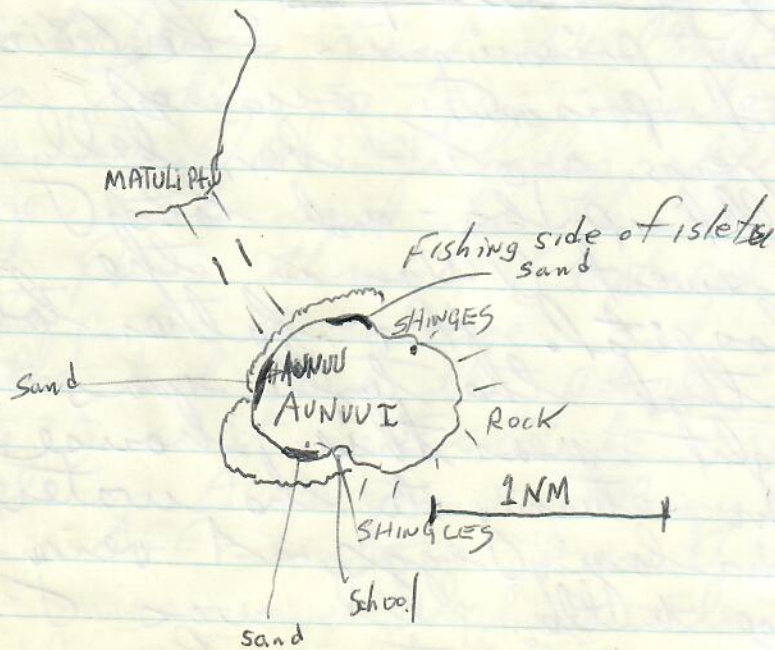
Paid Jack ERLE \$20 for round trip for all of us to Aunuu. Departed ~ 3:30 pm - 10-15 minute ride. Everyone

[Mother is JANE ERLE - postwar]

Drug store -  
 #5.95 earrings  
 on folded writing paper

works at college (Card Grant). Has a degree 47  
from Ag. at UH.

was in church - he was cooking food.  
Jack said that turtles are no longer  
eaten by villagers - considered  
bad omen ever since poisoning  
occurred. He has never seen decorative  
shells in village houses. Not  
originally from islet, but his wife  
is. She was born in 1952 and was  
6 years old ~~1958~~ when poisoning occurred.  
She ate eggs, so didn't get sick.  
We walked along cement sidewalk  
of south shore to the <sup>PAST PUMP</sup> school. Some  
beach present here - 2 photos.



3 OCTOBER 82

SUNDAY

Cots of white coral shingles line the coast in areas - apparently these look like sand & beach from a distance. white sand is very fine.

Fringing reef flat appears to require high tide for turtles to get over.

Met Lilii Sele (transvestite from Alaska and Las Vegas - been away 12 years) -

We visited her father's house apparently also named

Lilii Sele for full Samoan tattoo. She recommended

reading a book about Samoa by (a) "Sherie Lipton" - tells

about poisoning. She (Lilii) said poisoning occurred

"18" years ago - her belly swelled up big - and lots of

sweat. I was in the hospital. Her father told her that the turtle was

caught near their house when returning to the water from laying eggs. A very

large turtle. I was shown 3 <sup>large</sup> sautes of

cemetery?

Box  
1930  
AVUUU

12/82 located  
book at Hamilton  
on Fiji -  
"Fiji I love  
you full speed  
ahead"

a humpbill - reported to have been from that turtle.

Later Jack asked his father-in-law, Mr. Foltau (Matai Molia) (who is blind) and was told that the entire village got sick - everyone sent to dispensary for shots. 4 children aged 3-4 died. Symptoms were rumps of body and especially throat. The more you ate, the rumber you became. This was a large turtle, so everyone in village got some. Rick mentioned that event may have been described in old newspapers (Or I thought of PIM<sup>1900</sup>). The people still eat eggs now, but only accidentally found when digging beach holes to burn trash. No one intentionally goes looking for them, reportedly. We saw 2-3 humpback whales off South shore. Jack said he thinks they just pass through (Sept-Oct) - don't pup. Once we got caught on the reef and the people "used" (ate?) it. Estimate ~300 people on Aunui now. Many children. New ACE harbors present. Village has microwave telephone. Electrical cable. Food for lunches brought

Cemetery?



3 OCT 82 each week for school children.  
 SUNDAY ~~When~~ We walked to the end  
 of sand beach on the north  
 shore. The sand only goes up  
 to slightly inside vegetation zone  
 where it meets humus / shingle  
 hard mass unsuited for nesting.  
 Returned to A.C.C. harbor - Jack told  
 us that was the end of sand  
 beach - only shingles thereafter.  
 Returned to "mainland" side at  
 ~6:15 pm - near sunset. Returned  
 to Pago in Rick's jeep.  
 Pork spare ribs for dinner at  
 Rainmaker restaurant.

4 OCT 82  
 MONDAY

4 OCT 82 UP ~7pm - drank coffee in the  
 MONDAY room and did some paper work.  
 Met with Henry & Paul Pedro, etc  
 at 9am concerning expedition.  
 Telephoned Terry Feistel, ~~688-7686~~ Visited  
 the "library" to search for records of  
 poisoning at Aunuu. Lady named  
Lala very helpful. Couldn't find  
 any reference to a book by  
 "Sherry Lipton"  
 also - nothing in SPC. Their old  
 newspapers didn't date back that  
 far, but saw a scrapbook of

4 OCT 82 clippings  
MONDAY

IDEAS - ① Check PIM's  
② Samoa News office  
③ Banner/Helfrich

SPC July 1959 page 31

Telephoned Judy at (633-1222 LBJ Hospital) medical records at the hospital - records don't go back that far, but she will ask other staff members about the case. Papa showed me a mimeo book:

"TALA O LE VAVAV

Samoa legends collected & translated by Brother Herman

Published by the Association of the Marist Brothers' old boys  
Pago Pago, American Samoa 1955 "

I had the following English sections photocopied-

- ⑫ Legend of the Shark & the Turtle
- ④① Sammanifaese and the Turtle
- ④⑥ Tigilau and his turtles
- ⑧② The Rooster & the Turtle

Departed Pago in Sausauimoana at ~ 2pm. Passed right by Aunuu school/beach. Not all that rough, but I spent a sea-sick night. ROPETI (Robert) is Rick's student. - recently returned from the mainland.

5 OCTOBER 82 Arrived off Rose at ~ 7:30am.  
 TUESDAY Circled atoll and caught a few fish  
 trolling. Also 3 brown boobies on lures.  
 Transported all gear via small  
 Boston whaler to campsite at S-SE  
 end. I stayed on Sand Island

5 OCT 82  
 TUES.

during one of the shuttle trips.  
 Counted 27 digs - all shallow  
 in this gravel substrate, except  
 possibly one that may have contained  
 eggs. Tracks present indicated  
 all digs made by no more than  
~~4 turtles~~ <sup>4 turtles</sup>. No birds - but from boat saw <sup>large</sup> flock  
 Set up <sup>500TYS</sup> ~~up~~ last off. No evidence of nesting.  
 Camp tents - (5). - <sup>He lunch,</sup>  
<sup>caned turkey sandwiches</sup>

Noted again that the perimeter of  
 island is sand/coral, <sup>which</sup>  
 the center is thick brown humus  
 decaying matter from Pisonia forest.  
 overlying limestone foundation

6 OCT 82  
 WED.

Walked around Rose at ~ 2pm.  
 Counted pits & tracks as follows:

Camp to wooden Refuge sign -	1 <sup>pair</sup> tracks
	5 pits
Wooden sign to metal sign -	1 <sup>pair</sup> tracks
	6 pits
Metal sign to clearing -	1 <sup>faint</sup> pair tracks
	16 pits
clearing to camp -	2 pits

TROSPASS

5 OCT 82  
TUES.

29 pits

3-4 pair tracks

TOTAL

NOTE:

old tracks show up much better at night using a flash light.

All pits under Messerschmitts - would be impossible to see in a visual survey. Between metal sign and clearing there are some large Messer. toppled on their sides - photos taken. Storm waves apparently hit from the N-NE.

Slept from ~3 to 5:15 pm.

Ragu spaghetti dinner 6-7 pm. <sup>Many Rats</sup> in CAMPSITE.  
Surveyed island three times during the night <sup>TUES</sup> 10/5 - <sup>WED</sup> 10/6.

High tide somewhere around 2100h (9pm).

Survey 9:15 pm - Nothing

11:30 pm - ONE possible up/down NORTH END but no returning tracks present

6 OCT 82  
WED.

Noted that debris line of leaves is helpful in detecting tracks of turtles going up under vegetation.

Walk around ~8am with William -

Noted young coconut pieces on the north end beach, chopped with a small knife -

William estimates 3-4 weeks old.

He also mentioned that some of the Sargliners have skiffs w/outboards.

Found coconut tree where nuts were picked.

TRASPASS

6 OCT 82 Longliners started out of Pago - 1954?  
 WEDNESDAY according to Van Pel SPC Bulletin article.  
 FWS needs a descent <sup>large</sup> sign at  
 the entrance - on Sand Island,  
 probably best.

In the morning, William and I walked  
 into Pisonia forest to coconut trees  
 and cement markers. Saw finely shredded  
 coconut fibers most likely from large  
 coconut crab. Also saw what appeared  
 to be old turtle track way inland.  
 During last night, the sootys moved  
overhead making a loud noise.  
 Most other birds seen consist of young  
 Brown Boobies.

William mentioned the "200 turtles in  
 the lagoon" old aerial report and  
 suggested that maybe they counted  
 coral heads in the lagoon.  
 With all the <sup>SCUBA</sup> diving on clam surveys,  
 no one has seen large numbers of  
 turtles in the lagoon.

10/5 Paul Pedro reported seeing one turtle  
at the channel entrance. William saw one  
 near sand drop off near Rose Island.

Concerning the report of rats eating  
 hatchlings, I wonder if camp lights  
 first attracted the hatchlings from  
 their normal path?

6 OCT.  
 WEDNES

NOTE -  
 SOME YEARS  
 AGO, COLEMAN  
 FOUND TURTLE  
 BONES ON  
 SAND ISLET  
 10-82 I  
 found some  
 old rib bone  
 there

6 OCT. 82 <sup>11am</sup>

WEDNESDAY

NOTE -  
SOME YEARS  
AGO, COLEMAN  
FOUND TURTLE  
BONES ON  
SAND ISLET.

10-82 I  
found some  
old rib bones  
there

Walked into forest to view <sup>STORM</sup> damage and look for turtle ribs reported seen by Pedro 3/82. A few Pisonia trees toppled & branches broken off. Photos taken of slab structure, trees, and red-tailed tropic bird. Ate peanut butter & jelly sandwich. Lunch-divers returned for lunch at 1 pm. Saw one large turtle <sup>again</sup> near sandy drop off of islet.

Left from 3-5 pm.

BACKNOTE: George Ray owns SPIA - also holds lease on airstrip at TAD.

Thick brown humus under Pisonia forest, but also some slabs of limestone ("foundation" of islet) and chunks of <sup>true</sup> coral showing. "Rim" of islets' hat is sandy substrate suitable for nesting. This is mostly under Nasserschmidia.

Robert reports hearing that "hatchlings" are found at Poloa Beach - near elementary school - west end of Tutuila. William heard that a turtle hauled out and crawled into his village area shortly (?) after Aunua poisoning. Turtle was put back in the ocean. Torgals sell turtle in rural areas -

Sweet spot

also possibly to Korean & Taiwan boats -  
Swain's (Island scowres (photo at  
ICEWICH RESTAURANT) visited Rose from  
Swains to Pago - stopped to  
get clams and birds (to eat). Hit in  
head at night, <sup>found</sup> with a lantern, William's  
father, was aboard. Also at one time  
brought back a small turtle to William's  
house.

PROJECT IDEA: Obtain some "headstarted"  
hauksbills, <sup>graft?</sup> well marked, from Western  
Samoa and release them at Rose.  
[10/6 - 10/7] checked around island  
Wed. Thurs.

at 8pm, 10:30pm (high tide & moonrise), 12:15am,  
3:30am and 6:15am

No signs of nesting. "High tide" seemed  
noticeably lower than last night - but table  
only shows 0.1 less. Possibly stronger  
ocean waves drove tide up higher last  
night.

7 OCT 82  
Thursday

7am radio check with Paul on  
boat indicated that they had seen 3  
turtles near pass. Last night's  
radio check suggested heavy drinking on  
boat ("Swain's Island").

Pedro went out on clam survey this  
morning.

7 OCTOBER  
Thursday

sent  
NEED - Letter of commendation to Henry about  
Paul & crew.

7 OCTOBER 82 BACKNOTE: Pritchard (♀) will be laid to  
Thursday relatives, but there is a <sup>legal</sup> problem because  
they are less than  $\frac{1}{2}$  Samoan.  
Inheritance has been challenged?  
Slept from 10:30 am - 11:30 am -  
then went out and sampled soil  
for moisture-chloride analysis by Johannes.

Sampled 5 surface (X-on cap or X, #) and 5 at ~ 12" deep (I, II, III) at  
① clearing ② NE side and ③ west side  
just south of Refuge sign. At each place, I  
dug near a turtle nest - all were under  
Meserschmidia - in fact, there are no nests  
in the open. Mouth of vials did not  
allow random sampling of all size particles.  
Noted fine rootlet throughout upper (and lower?)  
levels of substrate that helped hold particles  
and allow an egg chamber to be excavated.  
Recall that Hirth <sup>1969</sup> questioned whether or  
not turtles could in fact dig a  
successful chamber. Watched BIK-TIPS & took  
photos.

Received word that one of crew members  
cut his hand on bottom-fishing reel.  
At ~ 2 pm William and I went out to the  
boat to fill water containers and take  
Robert aboard for trip to Tau. They  
are scheduled to leave tonight - return  
6 am Saturday morning.  
Sept 6-8 pm. Macaroni & stew for dinner.



7-8 October 82

Thurs - Friday

First survey of island at about 9:15 pm.  
 Nesters found (between two refuge signs  
 on west shore, up under Messerschmidia.  
 Strong smell of turtle feces. Just  
 starting to dig apparently.

8 Oct 82  
FRIDAY

5818 LFL

5819 RFL

5820 2nd Scale R

5821 2nd Scale L

logged  
TDPS

S - 105.1 x 79.8 cm (WHITE TC 1)  
 Clean carapace and skin - brown -  
 Turtle returned to water shortly  
 thereafter.

12 Midnight check - no labels  
 South-East side, again under bushes.  
 covering-up nest - seemed to be  
 shallow, as others were.

5822 LFL shallow,

5823 RFL

5824 R 2nd Scale

5825 L 2nd Scale

S - 96.2 (WHITE TC 2)

color = many photos on roll 3 - 3.5 - 5.6  
 red mode.

Scale counts - in - out, anterior edge, 14 is claw  
 in - out, posterior edge, 7th is largest  
 6th seems to be a small  
 subscale of what is 6th in Hawaii

Cloaca area seemed "baggy" - distended.  
 Red alga noted in small quantities.

3 am check - nothing.

NOTE -  
 see if I  
 can count  
 scale in  
 Tokelau  
 photos

8 OCT 82  
FRIDAY During trip in March 82, William and Dick Weiss sighted 3 males' adult outside pass; also a juvenile green inside the lagoon.

Clam survey people went out - Fam; cooked egg omlett for breakfast. Walked to "clearing" and took bottom and surface samples (#4), then to north point - samples (#5). NON-NESTING AREA. OPEN GROUND.

Clam people came in for noon break - saw 1 small ♀ and 1 male green at far end "pinnacles" area. William and I left in boat to take underwater photos and look for turtle. Very calm water. Motored along the SW "side" at edge of sand dropoff. First we saw one large adult female with larvae on right side of carapace. She dove to deep water and I watched her from the boat using a facemask. Next we saw a ~18" green - also dove to deep water. Then later ~16" green - light tan in shell color with 9-10 or 11<sup>th</sup> marginal missing on the right. I jumped off the boat after the turtle, but missed it. We snorkeled in a shallow area and I photos coral heads, clams

8 OCT 82  
FRIDAY

and fish. Found a crown-of-thorns in coral head. At ~ 1:30pm a C-130 presumably US Coast Guard circled <sup>twice</sup> over the island and atoll. Photo taken. We returned to the island and I tried to call them on channel 16, but they had already left for 5-10 minutes - no answer. Slept from 3-5:30pm. Walked around island land out on reef flats. Low tide. Saw tracks on sand flat of intertidal zone where 5818 had crawled to the island. Surprising that they stayed imprinted for so long. Off the north point, on the reef flat, I found the jaw bone of a whale? Most of it is still hard and in good shape.

For dinner we ate chung king and some fried black ulua. At ~ 8 pm we saw the lights of a boat off the reef opposite camp side of the island. 2 white lights even height and a slightly lower dimmer green light on the left. Stationary for some time, but after about 1 hour, during rain showers, it moved. Radio calls on channel 16 failed to get a response.

Idea: Tide calendar for A.S. produced by OMR.

8 OCT 82  
FRIDAY9 OCT 82  
SATURDAYNEVER  
CONFIRMED

8-90c

Their  
radio  
not working  
properly

8 OCT 82  
FRIDAY Noted lots of "marge" on the rats.  
Divers reported seeing 6 large turtles  
in the afternoon - same general area.  
Two were floating (basking) at the surface.

9 OCT 82  
SATURDAY

Rain and wind during the morning hours. Ship returned ~ 8:30 am.  
Paul reported seeing white vessel stationary about 40 miles out; believes it was the same one seen at Rose in March when they were anchoring up. He heard on the radio that the coast guard plane was searching for a lost couple. <sup>Plane heard again ~ 10:15 am</sup>  
Need to check with USCG or local harbor master about the vessel.

Noted that the Homotrema seems to flourish on the ~~soft~~ coralline algae pieces down under the surface on the reef flat.

8-9 Oct

Island surveys with William Pedro consisted of 9:45 pm - nothing  
12 midnight - up-down track at North point - long ways up and under fallen mess. - no digs.

3am - nothing

~ 6 am Ludwig walked around and saw nothing.

Rain all morning and off and on until ~ 3 pm. Mostly ~~it~~ was confined to

-28°C bottom > Ludwig recorded temp.  
30°C top in lagoon

9 Oct 82 the tent, but got around once - also took photos of green "lichens" on tree trunks. Wind ~ 20-25 kts.

10 Oct  
Sunday

9-10 October 1982

Turtle survey - Balazs/Pedro

9pm - tracks and nesters found immediately west of campsite.

5788 LFL

5789 RFL

5790 R2<sup>nd</sup>S

S- 95.6 x 76.1

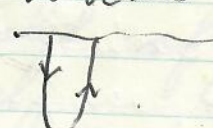
Winged ID 89


Carapace color - brown & lots of clear tan/honey. Turtle had crawled to limestone bank, and then along some distance under bushes. Piece missing out of left flipper trailing distal margin of U right side of carapace. 5 barbedes present at various places on the carapace.

Checked again at 11:30pm, 3:30pm and 6pm - nothing more found.

10 Oct.

Sunday Left from 6:30 - 8:15 am. Found that Saupaiwoana had anchored inside lagoon. Rick and Jerry had walked way down the reef taking measurements. I walked out to reef edge and collected samples for Kitty Aglan.

10 Oct 82 Sunday "Boulders", in my opinion, are remains of old reef. Noted similar slab material right near the island. Motored to Sand Islet with Rick to pick up William and Jerry. Once again examined false digs on island, - 2 crawls, perhaps 4 new digs present. At far end of island I noted that finer sand exists. This is the site where I saw a presumably good nest. Consider effects of this being out in the open, while all on Rose are under bushes (shaded). Motored to boat where we talked to Paul and ate Simin. Paul said that in Tokelau a turtle egg in the clutch that does not hatch is called "ILO". Also, when the tracks of a nesting turtle are like this  in → direction on the beach.

We motored to Pinnacles - almost to the surface, but depth along side of ~ 50-40'. I saw a smallish male with some sort of minor injury on the posterior edge of the carapace. (It was deep, and swam off probably at the sight of the scuba divers. Later I saw the same small brownish juvenile with piece out of carapace. It looked skinny. Piece was  bite?

10 OCTOBER 82

SUNDAY

Saw imprints in the pinnae with silt below showing marks that I believe were made by sleeping turtles. Returned to camp - cloudy and light rain. William took the BW and 4 crew members (visiting island all day) back out to the boat and switched anchorage to near pass.

logged  
5714  
5792  
5793

Note - "endangered" status of Rose Atoll (Samoa) green turtle breeding population.

- ① Only breed at Rose
- ② Very low numbers - historical indications of great numbers.
- ③ No protective laws in W. Samoa
- ④ No <sup>marine</sup> enforcement branch in A. Samoa
- ⑤ Conscience - remission - hard to patrol.

11 Oct. 82  
MONDAY

10-11 October 1982

Sun.

- Monday surveys

8pm (with Jerry) - nothing

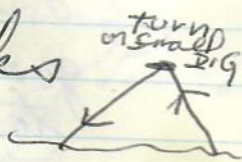
10:30pm TC3 (not too far from north point - west side - near previous crawl out) photos - Roll 4

C-100.2 x 93.5

covering up with birds when first seen.

2:30am - 2 sets of tracks at N Point  
few digs apparent,  
another set of tracks

logged TDPS ✓



5711 FC  
5792 PFC  
5793 L 2<sup>nd</sup> scale

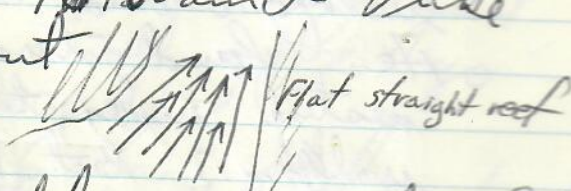
4am  
C-108am

North<sup>most</sup> Point - had apparently  
just crawled up to Moss tree  
Left hind limb

2 large barns on carapace -  
light dorsal streak; I believe this  
is the one I previously saw  
deep in the lagoon,  
6-6 count on scales

"TC4" but  
not sprayed

11 Oct. 82 Monday Made last check around the island  
at ~ 5:30am - light out. No new  
tracks. William came for me at  
about 6:15am. SS.M came closer  
to islet after anchoring overnight near  
channel. Left V tags 5794-99  
(6 total) and pliers with Jerry.  
Left pass at 7:00am - like  
a "vortex" sucking out



No new tracks noted on Sael Islet.  
South swell is up - wind brisk  
but boat moving with the seas  
made it a reasonably smooth trip -  
only took one seasick pill before leaving.



11 Oct 82

MONDAY

Paul Pedro mentioned that \$20,000 a year is now made available by the government to Wally Jennings for charters to Swains. SSM cost \$2,500 a trip - usually stay 4 days. Last Copra made at Swains was 1972. Paul picked it up. Conceivably, Tokelau boat could pick Copra up there.

There is a white sand beach all the way around Swains - very little rock like in Tokelau. When SSM went to Swains shortly after <sup>from shipyard</sup> arrival, Lt. Gov. found that there was no teacher there for the past 8 years. Thereafter, a teacher and supplies were sent up. Paul was born at Swains. Note gov. funds/boat being used for charters to a privately-owned island. Also, reference was to an airstrip being built there.

In June, Paul was at Swains and walked around the island about noon-time. He found tracks and a green turtle nesting under the bushes. He continued walking, but Frank Pedro, William's older brother, turned the turtle over, got villagers and <sup>paopao</sup> canoeed it away. It was prepared "the same as in Tokelau". Eggs taken too. The shell ended up in Frank's house in Pago. Paul has been

close

HOSTS

LAAU 07

NAME:

FAAUA ♀

FAIAI

12 OCT 82

TUESDAY

to Atafu several times, once with SSM,  
to take injured/sick people to Apia.  
Met "Danny", a Hawaiian now living  
on Tau, that returned to Rose on Paul's  
boat. Motored along the South  
coast of Tau - several photos taken.  
Tau harbor had breaking white  
waves all the way across the  
entrance, so we couldn't enter. Motored  
of to Ofu harbor. Sailed along the  
south coast of Ofu-olosega.

~~Tied up in Ofu~~ about 4 pm.  
Walked to home of people William knows -  
was related through marriage to his brother.  
He and talked. Tried to find  
telephone number of olosega hotel. None  
available. Later found that contractor  
has rented whole hotel for duration  
of harbor repair. William later  
got a "public works" pick up out (called Dick)  
We drove to the hotel. <sup>8:30</sup>pm Lady next  
door offered to let us stay in "guest  
house" fale in front. Finally, got to go  
to sleep at about 9:00 pm.

OLOSEGA  
HOSTS

LAAU ♂  
NAME:  
FAAUA ♀  
FAIAI

12 OCT 82  
TUESDAY

Woke up about 6 am. - Had  
breakfast with the wife - Her family  
lived in San Diego for 15 years - been  
back for 5 years. This is Olosega Village. Harbor  
site is Ofu Village. Celebrations next to  
hotel on Thurs. & Friday will be to confer

12 OCT 82

"<sup>high</sup> title of talking chief" onto Milo.  
 Notes 35-40+ buckets of Ref.  
 Also they will bring in fish, lobster,  
 clams (formosa) clam shells seen in  
 house - larger than what is at Rose.  
 Clams are found on reef and deeper.  
 "plentiful". No scuba here. Wife FAAUA  
 indicated that turtle would not be brought  
 to the celebration. She hasn't seen  
 any shells in village houses. Does not  
 know of decorative jewelry being made.  
 Told that the "Fai Fa Au" <sup>ONE</sup> <sup>WORD</sup> (LMS (minister))  
 "got" a turtle 7 months ago - he  
 knows how to butcher and prepare turtle.  
 No <sup>NO TROPHIC</sup> <sup>CONDITIONS</sup> <sup>OF</sup> <sup>EXISTING</sup> <sup>VEGETATION</sup> <sup>IN</sup> <sup>THE</sup> <sup>VILLAGE</sup> is interested  
 in turtle - like in some villages.  
 Fish are sold sometimes from a  
 boat <sup>(a year)</sup> by the "1979" <sup>ONE</sup> <sup>LANE</sup> <sup>BRIDGE</sup>.  
 Saw white terns <sup>(+ white-tailed tropics)</sup> by the vegetation-  
 covered sheer cliffs flanking the  
 village. Heard that they eat boobies  
 and Frigates (FWS examined seabird usage  
 the way they mentioned in Strategy Plan  
 for TT (?))  
 MAUVA Islands have "direct Microwave  
 from telephone to Pago

- 2.) TV
- 3.) Good roads
- 4.) Electricity
- 5.) Harbors

12 OCT 82

TUESDAY

- 6.) "OLD AGE" Program (+free flights to Pago once a month)  
 7.) New School buildings  
 8.) Good drinking water  
 9.) Air Service  
 10.) Gov. vessel shipping  
 11.) Health care

SPIA agent for Ofu - "Susuli"  
 her father is a big man (chief) -

Money to Manua people comes from  
 1.) Social Security 2.) Retirement in Service  
 (Marines, etc.) 3.) Money sent home by offspring, etc

9:30am

Drove in Gov. Truck to area by Church  
 in Ofu - stopped to talk to 4 old  
men pulling weeds in "OLD AGE" program.  
 Sat and talked/interviewed them through  
 William Pedro. Results of interviews  
 as follows:

FOR  
OFU

- NAMES: 1.) SAÚ (visited Rose - partly BALO)  
 2.) LEOTA (Glasses - & full waste tattoo)  
 originally met at his house  
 upon our arrival in Ofu  
 3.) TAEAO TUI - ATE AT HIS HOUSE shortly  
 AFTER ARRIVAL - SHOWED  
 ME TORTOISESHELL CURE  
 BROUGHT FROM HIS HOME  
 4.) MALIE TUFA - ORIGINALLY FROM  
 PACOA ~~BLAGE~~ ON  
 TUTVILA, WHERE  
 TURTLES NEST.

12 OCT 82

TUES.

Photos taken of all four men, with promise to send them prints.

12 OCT

"Also, test questions to confirm reliability"

As with all interviews, William started off by telling them in Samoan (that I am a "turtle scientist" that studies and tags turtles at various places in the Pacific; we have been to Manu Manu tagging turtles and want to alert people in Manua that if they find a tag to send (I should have said telephone) office of Marine Resources. "70 study migrations".

one of the men asked if a "reward" is paid, and I indicated that "not usually" - but for Manua a gift would be sent.

They indicated that turtles were not traditionally fished - if you catch one (you don't have to distribute it).

The main method of fishing was with "Tamu" leaves - laid out on the surface, then wait for turtles to rise up under as shown by "bulge". Both species do this - hawksbills (Caumei Uga), and greens (Caumei eraena).

12 Oct 82 Turtle is then speared from a boat using a 3-prong spear - must hit the turtle in the head. This takes an expert. If speared through the shell, and it hits the digestive tract, the turtle is no good to eat - whole thing is thrown away. To clean a turtle speared in the head, the neck <sup>throat</sup> is cut and the entire G.I. tract is pulled out (my notes obviously you must also sever anal opening; also if the stomach is greatly distended with food, I don't see how it could easily be pulled out - maybe squashes down?). The men indicated that an excellent Tamu leaf turtle hunter is Feagi'ai - work at the power plant. Men indicated that this method hasn't been used for a long time; now turtles are sometimes caught while men are diving. Men did not know of a special name for the Tamu leaf method.

Another old turtle fishing method is to get the branches (of a breadfruit tree), put them in the water, and (spear?) or catch turtles when they are eating blossoms (both species) as said to do this.

If the gull bladder breaks, the turtle flesh is considered poison, and therefore thrown away.

12 OCT 82  
TUESDAY

12 OCT

Mr. Malie Tufa, from Paloa village Tutuila indicated that in his village it is traditional to take a turtle to the chief when one was captured. There are certain seasons that they come on the beach. When there is lightning, full moon and high tide, it is a sure thing that a turtle will come on the beach. When they catch a turtle at night, they tie it to a pole, wait until morning, then <sup>cook whole</sup> cut it up and give to the people. Cooked whole to preserve juices. Take out eggs and cook separately.

At Ofu <sup>the</sup> men stated that both species go onto the beach -

- 1.) SAMOI Beach (saw tracks 2 months ago)
- 2.) VAOTO Beach
- 3.) TOAGO Beach

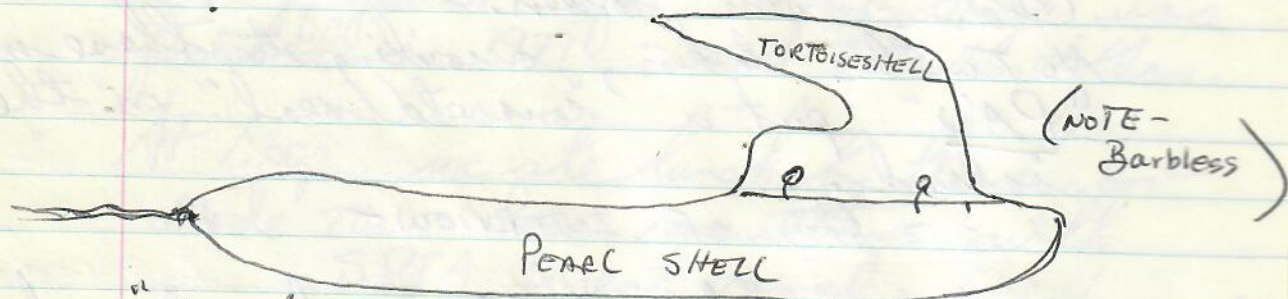
Turtles are not so important to them, so they don't know if there are "special months" when they come ashore to nest. However, I stated that the presence of lightning is important. There is no special method for finding eggs. If tracks are seen, they dig with hands. They walk beaches while pole fishing, I happen to come across tracks. Eggs are prepared by boiling, but they don't get hard. For they are eaten raw.

FORGOT TO ASK ANY QUESTIONS ABOUT MEDICINAL PROPERTIES OF TURTLE EGGS.

OF ANSWER WAS THAT THERE ARE NO SPECIAL MONTHS.

"STAY SOFT"

- 12 OCT 82 The tale <sup>belief</sup> story was then told about the female waiting for the ~~eggs~~ <sup>eggs</sup> to hatch so she can eat the hatchlings. On ~~ofu~~, the hawkbill plates are used to make skipjack lures, or they are sold in Tutuilila. There are three kinds of turtle-shell lures: <sup>(SKIPJACK)</sup>
- 1.) PAUSI - white pearl shell, dark turtle hook
  - 2.) ULIA - white pearl shell with a dark spot on the outer end
  - 3.) LAUMILO - brown pearl shell



"Tree twine" is used to tie point to pearl shell - also to make <sup>the</sup> fishing line itself. Twine is made from the skin of a tree called SOGA.

The above is an approximate sketch of a lure shown to us by TAEAOTUE - brought from his house nearby.

In older days, tortoiseshell was used to make pins for children; also brackets and buttons.



AI AFU = "eat sweat"  
benefit unfairly from work of others.

12 OCT 82 TUES. My notes are unclear at this point, but I believe that it was said that the Leasuasu Foga'i family at Fogalu Village (Pogo?) Tatuila, makes tortoiseshell jewelry.

Concerning Rose Atoll - The old men indicated that the Governors used to pick up 5-10 men from each village in Manua to visit Rose on (Navy?) vessel. 3 birds were allowed to be taken by each person.

Clams were taken.  
No Turtles taken, according to these men.  
"PAU" put a "concrete seal" on the island.

- END OF INTERVIEW -

Walked on white-sand beach adjacent to Ofu airport - picked up piece of "blue" coral and broken pieces of flat white coral. Sand is very fine. Photo taken. Noted that high tide goes right up to thick vegetation line.  
NOTED red Honotremas on coralline algae rubble - Like at Rose.  
There is no high school on Ofu-Olosega. Students must go to Pogo/Tatuila.

Short discussions with "Richards" - contractor for repair of Ofu Harbor (Lahaina (?) Company). Originally worked for Hawaiian Dredging -

then started his own company; does a lot of jogging and walking on beaches - always sees other footprints made before him; believes people (kids?) would just break eggs for the hell of it - same way they cut down trees for no apparent reason; Lots of "fishing" with dynamite takes place - mostly for Vofelu in schools - in deeper water - not on reef; people have lost an arm from this practice (I personally saw 2 on Ofu). Richards has been in Samoa a couple of years. Ofu - Olosega bridge was finished in 1979 - cost \$1 million dollars.

At 1:30pm we ate lunch by the harbor - Made Tau - Paga reservations with SPIA agent named Susuli.

Drove to Olosega village past CMS church - then walked away along less improved narrower dirt road.

Found a 12 gauge shot gun shell - used for <sup>fruit</sup> bats and boobies and frigates? later told that the man with amputated forearm shoots seabirds on Nuutele Is. at west end of Ofu. "Tele" means large. Noted that the 3 villages on Ofu - Olosega - and especially Olosega Village, are situated on a coral-sand rim with a steep-cliff backdrop of volcanic plant covered mountain - see photos.