

Daily Log
July 9, 1956
Through

RG

Location APFL

BOX 1

Field or Daily Log

July 9, 1956 - Sept. 29, 1956

UNIVERSITY OF WASHINGTON

APPLIED FISHERIES LABORATORY

SEATTLE, WASHINGTON

Locality Parry Island Date July 9, 1956
 Personnel Allen, W. Baker - Donaldson Weather Shower
 Water conditions _____

Radiation level(s) _____

Operations:

Grace - please order the collection of charts and photos in:
 "Bikini and nearby atolls: Part I, Zoology: Plates 65-73
 and charts 1-11 - U.S. F. S. Professional Paper, 260-A" 5/10.
 Up early, very spectacular night

Plant material collected at Tarawa Atoll July 6-7, 1956

Coconut milk	Bikini Island	160 c.c.
" meat	" "	39.7 grams wet wt.
Lime spine	Abiang	17.5 " " "
" pulp	" "	50 grams " "
" seeds	" "	1.4 " " "
Banana spine	Bitarotoni	30 " " "
" pulp	" "	36 " " "
Papaya skin	Abaspero	5? " " "
" pulp	" "	1.0 " " "
" seeds	" "	4.5 " " "

Material mailed to A.F.L.

1. Envelope (a) Logs (b) Asparagus
2. Package (c) Antm tubes 1" x 2" tubes - for F.F.L.
 (d) Mocho fish samples - fresh material - plates - cards 55-54
 e. Kucui fish samples plates - cards 55-60
 f. Kucui coat samples - Kutho
 g. " bulk plant material
 h. Fruit - wet samples 4-29-56 & 5-19-56
 i. " - see Cucumbers

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Locality Pony Island Date July 9, 1956 (Cont)

Personnel _____ Weather _____

Water conditions _____

Radiation level(s) _____

Operations:

Zone collected at Kureia 5 July 1956

- ② Skin of line 17 grams wet wt.
 - ④ Pulp of " 31 " " " }
 - ① Sudoform " 1 " " " }
- } Put in vials

Tarawa samples processed for drying

5- hermit crabs dried entire w/ legs and abdomen removed and digested

1- sample algae - given sea lettuce

1 cucumber *H. atra*

- a. integument
- b. gut
- c. gonad.

1 cucumber *H. atra*

- ① integument
- ② gut
- ③ gonad

1. Octopus - 2 cones

1 Tern egg

- a - shell
- b - yolk
- c - white

W. Lander processed Tarawa fish for background counting and reserved for chemistry if needed.

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Locality Pony Island Date July 19, 1956
 Personnel Donaldson, Alan, Milender Weather showers
 Water conditions moderate

Radiation level(s) _____

Operations:

Donaldson and Alan collected plankton in the deep passage at 0800 to 0840 hours.

During the morning a conference was held on the Sept marine survey with Dr. Walter Cleaves & B.M. Capt. Coleman USN T-3 Lt. Col. J. P. Smith and Lt. Col. _____, U.S. Marine Corps, and J.P.D.

The discussion largely revolved around the date for starting the survey, the area to be covered, and the vessel to use. Sept 1 was the recommended starting date of the test so as now planned it should be possible to get underway by that time.

The question of the retention of the restricted zone after the test program was completed was discussed. I took the position that such a decision was a political one not a problem for biology.

Fish were mentioned as possible points in question. My comment was that the fish do not respect restricted zones and some freely migratory, moving from east to west, - so would pass through the zone and into open water.

Prof. Clayton M.I.T. spent most of the day at the F.M.B. photo graphing the two stone fish in the porch tank.

Walter bottles were picked up at the machine shop. and catch pins for the upper cable clamp and a stainless steel spring.

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Locality Pary Island - Panope Date July 11 - 53.
 Personnel Donaldson Olson - Weather Calm - rain.
7 loader Water conditions Calm

Radiation level(s)

Operations:

Up early for a look see at major clouds in the
 way.

Left Pary Island with our jeep at 0800
 soon joined at the m. boat landing by Dr. Walter
 Claus D.B.M. Lt. Col. W. Kitt U.S. M.C. and Maj
 Geo. Mangan. At Fred we were delayed on home
 because of possible need for the A5R-16 for a
 rescue mission or landing personnel back on Pitkin.

Left Fred at 0940 and arrived at Panope Head
 at about 1300. Capt. Forbush and crew did a
 very fine job of putting us down on the water.

We were met by the command and into the village
 Mr. Edward Iwaniec, District Agriculturist, Trust
 Territory Govt., Panope, Caroline Islands, took charge
 of our party in the absence of Mr. H. Hedges.

From our quarters we went to the Kungamony
 Village on Panope to try and interest some fishermen
 to go out for tuna for us. Most men and many
 women of the island were on the reef diving for
 trochus shell. The two week open season was on
 and the yield is stated to reach 15,000 pounds
 of shell or about \$50,000 worth - so the men
 were not interested in fishing - at this time.

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Locality Panopee Date July 12, 56
 Personnel Donaldson, Olga Kolander Weather _____
Claus, Witt + Marx Water conditions _____

Radiation level(s) _____

Operations:

Mr. & Mrs. Swanson took us by launch to the ocean reef dead north of the village.

Point was put out about one hour before low tide near the inner edge of the reef a good bill of reef fishes was collected. Most were the things we were familiar with. A few were collected that we have in our usual collections.

The reef differed from the usual reef we work on in having a gradual slope on the ocean side. We were told that usually this reef is so rough that one can not work on it. Our unusual low tide coupled with smooth water left much of the reef bare.

The coral on the reef was very rank with much stinging coral, we all had a few sore spots.

After the reef we went to the Swanson's home for a lunch, tour of the station and a rest.

In the evening I went to visit the Riddle's, Raymond D. Riddle, is now manager of the Co-op. was a high school student of mine at Shelby Montana

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Locality Panape - Pango Is Date July 13, 1956
 Personnel Donelson, Olson, Melander Weather Calm
Clouse, Witt & Moore Water conditions smooth

Radiation level(s) _____

Operations:

In the village of Panape are four reserves of native food, the Cash, the two Ischits, and Roberts. We had to make them all and purchase food.

The roads on Panape are so rough that most of the transportation is by foot for the jeep, trucks etc were broken down.

We walked up to the weather station and the Agri Exp Station where El Swenice loaded us down with, sugar cane, coconuts, breadfruit, pineapples, lemons, tava, tapioca, sweetpotato, bananas.

A number of coconuts were given us for planting at Emivatake. These nuts are a special variety that produce nuts as young as three years, close to the ground. The nuts are very large with a high copra yield. Our problem will be to protect them until they get started.

Had a lunch of coconut milk and breadfruit with the Swenice.

The plane picked us up at about 3:00 P.M. Local time - 4:00 P.M. Emivatake time. Return flight was smooth not even a rain squall. The sea was the smoothest I can remember having seen. Down at Ford at 7:00 P.M. and a late dinner at 8:30.

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Locality Perry Island Date July 14, 1956
 Personnel Donaldson, Olson, McLeander Weather Rain
 Water conditions Smooth

Radiation level(s)

Operations:

McLeander spent entire day washing up Panope fish.
 Donaldson and Olson make a helicopter tour 9.35 to 9.55.
 Plants from Panope were washed up for drying.
 Panope plant material:

Tapioca tuber	101	grams wet wt.
Sweet potato, white	122	" " "
" " red	134	" " "
Taro tuber (dry land)	138	" " "
Banana peel	19	" " "
Peeled bananas (green)	56	" " "
lime peel	5	" " "
" tissue	25	" " "
" seeds	435	" " "
Breadfruit seeds	42	" " "
" tissue	129	" " "
" peel	22	" " "
Sugar cane - stalk	144	" " "
Pine apple	132	" " "
Coconut milk	400	ml.
" meat young	35	grams " "

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Locality Perry Island Date July 15, 1956 (Sunday)
 Personnel Olson, Meland, Amelsson Weather Calm - bright
 _____ Water conditions _____

Radiation level(s) _____

Operations:

Cleaned up laboratory put away Louisa, Simpson, and Hilda cloths.

Continued to process Pacific fish, fruits, invertebrates, etc.

Sea cucumber <u>H. etes</u>	intestine	2.2 gms	not wet.
	gut	8.3 "	" "
	gonad	11 "	" "
" "	intestine	5.4 "	" "
	gut	6.1 "	" "
	gonad	6 "	" "
Print clam <u>Hippopus</u>	mantle	19.3 "	" "
	muscle	11 "	" "
	kidney	4.8 "	" "
	gill	3.1 "	" "
	visceral mass	13.5 "	" "
Algae <u>Halimeda</u>		5.1 "	" "
	<u>Turbinaria</u>	5 "	" "
2 Crabs - hermit	intestine		not weighed

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Locality Perry Island Date July 16, 1956
 Personnel Donaldson, Olson, & W. Linder Weather Showers
 Water conditions Calm

Radiation level(s) _____

Operations:

Ant packed fish for shipment to the lab.
 H-N. Came with a fork lift and put the
 wind in a crate which we left on the porch
 in the most protected place.

The water sample bottles that had been to
 the shop for repair were placed in the back
 with the ships gear.

Cd camping equipment was cleaned up
 and packed in the box for storage. All
 items were checked in except the electric
 light that was held out for future use
 if needed.

The tank for the probe was cleaned
 and sealed to await the Sept 1 survey.

Conference was held on Sept 11 survey needs
 again I tried to emphasize the need for an
 adequate boat to do the job with a time
 allowance sufficient to accomplish the mission.

The real problem is to get a ship with
 a fuel range sufficient to stay out for a
 time and not have to return to Kwajalein
 for fuel. The best proposal seemed to be one of
 a zig-zag course to Guam of about 2500 miles
 and fuel with a return zig-zag course to Eniwetok
 Oahu Ad. Brockett, Munson, Coleman all took part.

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Locality Perry Island Date July 17, 1956
Personnel Donaldson, Olson, & Melander Weather fine
Water conditions calm

Radiation level(s)

Operations:

Calm before the storm was rudely upset by a wire from Paul B. Pearson requesting a plankton, fish, water survey along $162^{\circ}E$ to outline level of radiation, this to be done at D+4 days. Dr. Claus, the diem, Capt Colman, Donaldson insisted most of the day trying to think up all the reasons why such an operation was impossible not feasible, etc, etc. A long note of explanation of position was sent Dr. Claus, saying in general that facilities people & time were not available now. It was also pointed out that this would delay the Rongelap survey to late Sept. or Oct. It was pointed out that the plankton collected in the deep entrance was as good or better index of ocean plankton than a few samples made in the open ocean & the impossibility of collecting fish in the sea from any of the many facilities was also pointed out. I suggested chartering a Japanese vessel to do the job - that was a "popular" comment.

Plankton tows were made in the deep passage at 0925 - 0945 lots of jelly fish in the tows. Asparagopus was collected on the water surface at 1730. Packed for the Ujeling trip scheduled for tomorrow Rongelap trip now scheduled for D+1 and D+2 an A.S.P. 16 will be used and make two flights.

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Locality Perry Island - Ugelung Atoll Date July 18, 1956
 Personnel Donaldson, Olson - Weather Calmer showers
W. Linder - Water conditions smooth

Radiation level(s)

Operations:

Left Perry at 0800 by "M" boat with full load of gear for 17th. Arrived at Ford by 10:00. Left ground at Ford at 0900 by ASR-16 and arrived at Ugelung atoll at about 10:00. Plane took up to a buoy and passengers and crew were carried ashore by small skiff powered by outboard motor.

A ship belonging to Scripps was reported as having drifted over for California and come into the atoll, after some months of use it broke loose and drifted out to continue its voyage.

The camp at Ugelung is operated by 14 AM for Radio-Isotope. There are 3 1/2 AM employees, with Public Health Service and 3 Army men stationed on the atoll. They have the usual field equipment, live in tents, with generator, compressor, etc.

Collections were made on or near the main island (Ugelung Island). Field collections were made on a rising tide near beach on the lagoon side east of the village. Permission to collect was obtained from the chief. A carton of gums and salt water soap helped convince the chief that collections were o.k. Coconuts are very scarce - pigs work the beach and may pick the coconuts down.

Return flight 1500 to 1600 - back at the lake by 1700 time to put away gear and clean up for tomorrow.

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Locality Perry Island Date July 19, 1956
 Personnel Donaldson, Sloan + Weather Clear - light
W. Sander Water conditions Smooth

Radiation level(s)

Operations:

Plankton collected 0820 - 0840 at slack tide, large numbers of jelly fish in the collection.

Asperogorgia collected at 0800 from water surface.

Collection from upland areas prepared for drying.

Bulk samples:

Hedimula 115 grams wet wt.

H. atra (3 individual)

gonad 10.0 " " "

integument 11.4 " " "

test and content 144 " " "

Pandanus - fruit 93.3 " " "

Papaya fruit 329. " " "

Breadfruit 273 " " "

" 330 " " "

" 200 " " "

Arrow root (all) 45.6 " " "

" " (meat) 97.0 " " "

Coconut milk 360 ml.

" meat 94 grams

Hermit crabs 1 large + 6 small sized entire.

Conferences on D+4 survey went on most of the day with Claus, Albert, Calverton, Donaldson, etc. Planned to try and get approval for continued survey to start about August 8-10 and include area north to the representative. Claus left for Washington at 190

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Locality Puget Island Date July 20
 Personnel Wardle, Olson, & W. Anderson Weather Shower
 Water conditions First white caps & winds

Radiation level(s)

Operations:

Another conference with Capt Coleman, Col Ceder and F. L. Ch. Bankhead, D.M.A. R. Albert, B.M. and L.R.D. All the problems and possibilities of what survey were discussed. Capt. Coleman relayed the message from Whaling that the trip requested for the school or combined survey was not available. In fact, no ship is immediately available. WTLF 73 strongly recommended that data on fallout in and on water be obtained from A.S.W.A.P. program of NYDA, N.R.D.L. and Scripps. They hope that Dr. Claus and Dr. Albert will convey the info to RBM. I suggested a meeting in Washington between Aug 10-15 to review our data now available and discuss additional problems to be developed during the Sept survey.

Sent wire to A.F.L. on return of L.R.D. and A.D.W. and requested Simpson and Leonard and crew be included for Aug. 1-3.

Specified samples of algae 3193-3195

Shampton 6064-6070 (including 6063)
 Fish 74-80

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Locality Perry Island Date July 20, 1956
 Personnel Grubbs, Olson, & Melander Weather Part. little breeze
 Water conditions Calm

Radiation level(s)

Operations:

Plankton was collected on an outgoing tide between 0935 and 0955.

Asperogone was collected at low tide on the outer reef

Trincher 17 (Tuna) at 0556

TTY received from Dr. Dunbar Br M with list of items to collect at Pongilepe with order of preference. TTY from 7.3 on assigning a vessel for Sept 1. and not leaving the time and conditions for trip to be arranged by us as soon as fuel and pattern is completed.

Supplies were obtained at J-4 and papers were sent by N F M for soil samples.

Background at	0800	37.9	} m counter
	1600	567	
	1700	1463	
	2000	7658	
	1800	25mc in walking to the beach survey	
	2000	85mc	150

Levels of background stayed about the same during the night except for drops during showers.

Summary of Program 35 activities past and planned turned in to 7.1 (St. Col Cruise). This is the requested summary x

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Locality Perry Island Date July 22, 1956 (Sunday)
 Personnel William Olsen & H. W. Hinkley Weather Showers - rain
 Water conditions 7 miles to bridge

Radiation level(s) 0700 - 9913/cm, 0900 - 14784/cm, 1100 - 8705/cm
1500 - 7441/cm.

Operations:

Eighteen of eighteen at 0556 (11:00 am). Not much of
 water, ice estimates about 4-5 feet ice and falling.
 Dr. Albert D.B.M. came to the laboratory to talk
 over again the request for a short survey and to
 show us a copy of a wire he was sending
 to Seabrook saying Bob Hanson would collect
 water samples from TU-3 and after analysis at
 NYOO send in the data to D.B.M. Dr. Albert
 was concerned about the level of fallout on Perry Is.
 Data readings at 3' gamma - only
 25 mc in the building 218
 100+ mc in the vicinity - outside.
 Arranged for Pangelap trip with Maj Leo Marx
 473 Packed collecting equipment ready for
 a 0600 departure.

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Locality Perry - Pongolapa Islands Date July 23, 1956 (D+D)
 Personnel Amason, 2 men 12 ducks Weather Partly
Telf and H. Malin Water conditions Brack.

Radiation level(s) 25 m inside 95 m outside with survey meter & counter
5225 at 1815

Operations:

Left Perry at 0600 for Ford in rainstorm departed Ford at 0700 for Pongolapa arrived at 0930 and was on the beach by 1000. Left Pongolapa 1530 and Ford 1735.

Telf and helpers surveyed the island with a Beckman 52-5 with tube < 23 mg tube².

Readings were obtained at 1" and 3" shield open & closed.

1	grassy area in clearing under adult coconut tree	1" 1.5	3" .4
		3" 1.0	.4
2	Eating house - construction site	1" 3.0	.5
		3" 2.0	.4
3	Under Pandanus on fallen leaves	1" 4.5	.7
		3" 3.0	.5
4	Low grassy area near bucket well	1" 1.1	.4
		3" 1.0	.3
5	Under Pandanus bushes	1" 1.3	.3
		3" 1.1	.3
6	Under Pandanus	1" 4.0	.4
		3" 1.7	.3
7	High tide line near end, occasionally washed	1" .6	.2
		3" .4	.2
8	Open forest area in clearing under coconut palms	1" 4.0	.7
		3" 1.1	.3
9	Clearing covered with long grass	1" 1.5	.4
		3" 1.3	.4

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Locality Perry's Pond Date July 23, 1956 (cont)
 Personnel _____ Weather _____
 _____ Water conditions _____

Radiation level(s) _____

Operations:

10	Across root patch under pandanus and coconut trees	1" 2.0 P.Y. 15.8	3" 1.5 " 12.8
11	Sand at high tide line	1" .8 " 3.3	3" .7 " 2.2
12	Under <i>Centuria</i> on dead leaves	1" 3.0 " 5.5	3" 1.5 " 4.4
13	Top of coral ridge in seaweed thicket	1" 1.0 " 3.3	3" 1.0 " 2.2
14	Under pandanus growth on dead leaves	1" 4.0 " 7.2	3" 1.5 " 4.4
15	Fine sand under seaweed	1" .8 " 3.3	3" .3 " 1.2
16	Under coconut trees in coconut harvest area	1" 6.0 " 10.0	3" 1.4 " 4.4

Sand samples were collected in 1 gal pails for shipment to NY 00

1st sample collected about 100' from lagoon near the village. Samples were collected from 1 gal pail at 0-2", 2-4", 4-6" depths.

2nd sample collected in the water village near *Papaya pandanus* and across root sampling station. These sand samples also in 12" x 2" at 0-2", 2-4" and 4-6" depths.

A second set of soil samples were obtained by driving a pipe of about 1 1/2" inside diameter into

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Locality Perry's Ponds Date July 23, 1956 (cont.)

Personnel _____ Weather _____

Water conditions _____

Reef level(s) _____

Observations:

The ground used upon removing the ends of the pipes were sealed with water thus retaining the samples in the same position as when sampled.

These samples are to be separated into 2" depths for drying and packaging. Locations sampled:

1. Inter tidal zone - on the lagoon side above high tide line.

2. Bank of village, about 75 yds from the lagoon.

3. In low drainage area near 2nd well.

4. Mid-land clearing among coconut trees.

5. About 30 yds from ocean side of island.

Fish were collected from the coral area on the lagoon side in front of the village. Potomus was worked over the coral as the tide receded. No clams were obtained.

Hermit crabs were obtained from the coconut grove and on the ocean side of the island. No crabs were obtained on the lagoon side. So a special trip was made back to the ocean reef for samples.

Fruits were collected in the resident areas.

Flight back to land commenced around 6:00 at E.M.B. at 6:15 - put the collections away.

Soil samples were put to dry in incubator. Other samples covered or frozen because of high temperature at E.M.B.

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Locality Perry Island - Kadelle Island Date July 24, 1956
 Personnel Anderson, Olson & Melander Weather Good
Taft - Calmer P.H.S. Water conditions moderate

Radiation level(s) at 1715 survey meter reading 10 mc inside 55 m
out side, counter at 0605 - 2580
 Operations:

Left Perry at 0600 by m boat with two jugs
 arrived at Kadelle at 0930 and went on the
 boat at 1000. Taft and Cole were mounted
 on island with a Bushnell M4-5 with table of
 vegetation. Stations are indicated by number on chart.

1	High till base on sand	1" 7 m. p-y	.30
		3' .5	.3
2	Among scattered trees	1" 9.0	2.5
		3' 5.0	1.5
3	Under edge of Scaevola	1" 20.0	7.0
	(1st spot indicated in ground. low ground covered with diverged vegetation)	3' 9.0	2.0
4	Under Gortaria on fallen leaves	1" 6.0	1.0
		3' 4.0	.6
5	Heavy clearing	1" 20	4.5
		3' 1.0	2.5
6	Under Scaevola outside of dead foliage	1" 16.0	6.0
		3' 2.3	4.0
7	Potulicia - grass - heavy cover	1" 2.0	.5
		3' 1.6	.5
8	Base ground to base of Messerschmidia	1" 5.0	.9
		3' 4.0	.7
9	Open space under Gortaria	1" 10.0	2.0
		3' 4.0	.8

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Locality Pinnacles - Katabella Date July 29, 1956 (Cont)

Personnel _____ Weather _____

Water conditions _____

Radiation level(s) _____

Operations:

10. Under <i>Personia</i> in bird nesting area	1"	7.0	P+Y	1.0 P
	3'	4.0	"	0.6"
11. Bare sand 40' from high tide	1"	2.0	"	.4"
	3'	1.9	"	.4"
12. Chasing in <i>Muraenichthys</i>	1"	5.0	"	.8"
	3'	2.0	"	2.5"
13. Under <i>Personia</i> in bird area	1"	10.0	"	2.0
	3'	5.0	"	.7"
14. Under <i>Gasterosteus</i> near bird nesting area	1"	6.0	"	.8"
	3'	4.0	"	.6"

Fish were collected in the channel between

the islands (north end of Katabella) along and around edge from the same area. Crabs and coconuts from mid part of the island.

1" soil sample in coconut zone about 1 sq foot 0-2", 1 sq foot 2-4", and 1 sq foot 4-6" for N/100.

2" soil sample above high tide line near fresh set 1 sq foot 0-2", 1 sq foot 2-4", and 1 sq foot 4-6"

Soil samples in pipe 1 1/2" diameter driven into soil.

- 1. Mud tide zone on lagoon side
- 2. Above high tide on the lagoon side
- 3. Inshore from the lagoon about 60 yds among trees
- 5. In shade coconut trees.
- 4. Ocean side above high tide line.

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Locality Perry Island Date July 25, 1956
 Personnel J. W. H. Anderson & Jackson Weather Stazy
 Water conditions moderate

Radiation level(s) 0.835 survey meter 5 m. inside 4.5 m. outside
 Counter background 1763 at 0930.

Decided to try and take to AFH half of each
 sample in a frozen state for processing
 because of the contamination of Perry and intense
 high background.

Col. Thomas Shea 7.1 D.M.A. visited the lab
 to discuss our program. The things we have done
 & things we hope to accomplish in the
 next few months.

Lt. Col. H. J. Watten 7.3 Sec. and to Adm. Welling
 visited the ship to report on the ship for
 the Sept 1 survey. The ship assigned - D.E. 699
 is a tinny down ship with a range of
 7 days at 12-14 knots. Ship is assigned to
 the 7th fleet. Col. Watten suggested an informal conference
 with the commanding officer with the proposed text
 and a copy of the Watten applications report.

I gave Col. Watten a list of handlers, names, 14-15
 and 1 condition as the persons to contact for support
 and direction. I also suggested that the 7th fleet
 be informed of the usefulness of the ship to the lab.

Anderson

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Locality Pangy Island Date July 26, 1956 Thursday
Personnel Smeltzer, O. Linn, W. Lander Weather _____
Water conditions _____

Salinity level(s) _____

Observations:

Delivered to Bob Lander a gal. can of soil
from Ponglap Island, ^{500cc} ~~1 liter~~ of well water, ^{500cc} ~~1 liter~~
of cistern water and ^{500cc} ~~1 liter~~ of cast water for Ponglap
Also 6 gals. of soil from Kabelle Island and
^{500cc} ~~1 liter~~ of salt water.

Shipped to A.F.L. via air Ponglap description
samples, cistern water, well water and salt water
samples.

Transect left 3 pm with frozen Ponglap
samples. Specimens were taken out of Ponglap
to Fine station & a tank of CO₂ gas run in
Three packages of samples mailed paper was put
Set up trip to Belle, ^{and Jones} Kadescape report
readings of 320 nr at Belle & 160 nr at
Jones. Bob Linn reported high counts
in water at Belle 200,000 cpm/?

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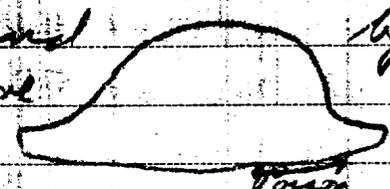
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SEATTLE, WASHINGTON

Locality Elmer Date July 27, 1956
 Personnel Olson & Welander Weather Sun + some clouds
 Water conditions Calm - no wind

Radiation level(s) ~ 160 mc at Janet () about 250 n
at Belle (160 to 350).

Operations:
 Left 0800 by Helicopter for Janet. Stayed on Janet 15 minutes. Saw 3 rats under various tin boards. No dead rats. All higher levels in trees showed least damage; otherwise normal - all tents swept away.
 Arrived at Belle about 0900. Tide going out. Picked up 4 Conchita, 2 sea cucumbers, Polynesian. Poisoned shallow area inside lagoon (side) of island by laying poison within 10' of shore. Poison drifted lagoon to the west. Obtained 75 fish of about 25 species.
 Returned 1100 arriving 1130 at Elmer.
 Processed massive samples of fish (45 species) and the invertebrates, & algae.



Land plants at Belle had lost most of their height (average height about 3'-4'). They looked like they would recover. Many full blooms on Belle, & new sprouts alive.
 Several goatfish, wrasse, alive and big Paul in pool on island - apparently killed in by waves? Mangroves planted in hole, 4 looked healthy.
 Damage to vegetation on Belle negligible compared to after Hector.
 Birds seen on Belle, the flying in vicinity.

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Locality: Elmer Date: July 28, 1956
Personnel: Olsen & Welander Weather: Sun & Clouds
Water conditions: Calm.

Salinity level(s): ~ 4 m inside ~ 25 m outside lab

Observations:

Olsen, Dr. Blake, 2 others started 0800
& fished till 1100 off Rex Island &
north, also deep entrance. Saw & tooted three
several schools of tuna but caught only
one school all morning.

Wetland removed & processed livers from
fish. Fish - all very hot!

Afternoon: cleaned up lab, did some packing

Packaged tissues from Pongelup & Belle.
Plankton too taken in deep entrance 1110

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SEATTLE, WASHINGTON

Locality Elmer Date July 29, 1956 Sunday
Personnel Olsen, W. L. Anderson Weather Bunny
Water conditions Calm

Radiation level(s) 15 m/hr inside 18 m/hr outside ⁰⁸³⁰ 1023 c/m

Operations:

Art brought bait to deep water pier for fishermen. End of day only catch was one snapper.

Packed crate for shipment home.

Packaged samples from oven.

Rearranged AFK locker in more orderly manner & stored more equipment inside like plastic bags, log books, plankton gear.

At 1500 took Bob Graneman & Hans Sadowski both NYO

down to dynamited coral hole south of CMBL for aqua lunging.

Out of three tubes taken down only one worked satisfactorily.

Art purchased cough syrup for ZI today.

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Locality Olney Date 7-30-56
Personnel Olsen W. Slender Weather Overcast slight Rain
Water conditions Change

Radiation level(s) 966 c/m background, 0.8 mc/hr inside 10-15 mc/hr outside

Operations:

Check out day for ZI.

Packaging final samples for shipment home

Delivering crate to J-4 for shipment home.

Straightening up lab & equipment

Contacted refrigeration regarding deep freezer panel defrost.

Air conditioning unit gave up ghost. Will require replacement unit.

Returned blasting cap detonator to Hank Burgess, Safety

Officer.

Placed Robot 35 mm camera & shotgun & shell with Security

Office.

Bulk ^{has} 100' ft roll 35 mm black & white Tri X left in storage with #4-8. Some 4 rolls Kodachrome with #4-8 for processing

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SEATTLE, WASHINGTON

Locality Elmer Date 9-17-56Personnel Palumbo Weather sticky

Water conditions _____

Radiation level(s) By counting room approx 24 hr

Operations:

Arrived Parry Island 1100 after being delayed at Hickam 17 hrs. also slight delay at Kwajalein atoll. Prepared for Deep entrance plankton tow (Lomonow) - set up radio meter and ran platform w/ Ra DTF std. set to count at 1350V.
Marsh delayed and is expected on 9-20-56.

Lab has been completely revamped and is in fine shape.

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SEATTLE, WASHINGTON

Locality E 1/2 mi., deep channel Date 9-18-56
 Personnel P. Colombo Weather warm w/ Rain squalls
 Water conditions _____

Radiation level(s) Bq/Lab - 20-24 c/m

Operations:

0830 Mboat w/ Dr. Blake to deep channel
 buoy for plankton tow - 30 minutes - $\frac{1}{2}$ mile
 nets (2) - good haul - fished also
 until 1100 - caught in Rex barge
 tow 1 branta, 1 *Apus virens*, 1
 jack, and 1 mackerel which got away a flea
 landing it - froze 3 specimens and will
 take birds to monitor here. Red Safe
 monitored muscle from 94th tuna caught
 Sunday - 73, 58, 8, 0 d/m \pm ? Lt. Morgan
 did then counting for use of nuclear Chicago equip-
 ment.

Processed plankton and water samples
 during the PM. Preserved plankton's exha + small
 "bead" (see Hatt) caught in plankton tow.

Prepared for tomorrow's trip to Belle.

Rate meter checked for efficiency against
 Rad. Std. To obtain d/m from E-AN 45
 records multiply by 2.98 or $\frac{3}{1}$

Water sample from departure today: particulate
 fraction = 120 d/m - MF - 880 ml per 5055

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ELPFF Fall

7-19-50

10:00 AM

Weather 74° at 3 PM on Pouch

Water conditions

Salinity level(s) Bgd EMOL 22 c/m

Operations:

0800 to Belle via H-19 Schlacks and Curry
Rad safe accompanied.

From Ann Belle looked to be in pretty poor shape -
Vegetation bent towards spine, lots of brown
foliage, bare branches and bare patches.

Landed at  Clam X and walked around

Area A and made observations of tagged plants, collected
a composite soil sample and composite

leaf sample of *M. schmidia* moved to

Area H and did likewise. Collected algae in

Area F-1 and F-2, most coral heads covered

by a fuzz of *Sphyrina* or *Rhizodermis*. Coral

colonies also covered and saw only a few colonies

that looked alive. Walked to area C and D

via empty tunnel cuts hole, collecting more

soil and leaf samples. Stakes in area were

either broken off at the ground or blown over

and some were blackened. Plants # 1211 gone

and # 7209 not discernible since stakes blown about

Pinpoint in hole doing fine, other is poor. Big

and spit near also changed markedly.



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P.2

Locality _____ Date 9-19-56

Personnel _____ Weather _____

Water conditions _____

Radiation level(s) _____

Operations:

Algae covered area E-1 similar to last observation
 Commonest algae were Padina, Enteromorpha, Spyridia
 and Rhizoclonum. Saw only one clump of Halimeda.

Collected samples for plating.

Saw no Tudacna, sea cucumbers, spider's nails
 or hermit crabs in areas E-1, F-1, and F-2.

None seen by other two people & I had asked them
 to look for them before they started out. Schlect

and Curry took meter readings across both transects
 AN/PDR/39 (old TTB w/ modification) (F-1)

	3 ft	1"
Lowest	38	44 m/m
Highest	46	60
Avg	40	40
Area D	46	60

General condition of plants was poor, but new growth is
 taking over - leaves to 3" long on new shoots - old leaves holey
 almost up especially on Scaevola plants. No flowers seen
 except on 2 Mess plants. Tallest plants w/ leaves at 6 ft,
 all sparse. PM worked up plants w/ homo freezer -

87,000 d/m/gm; Scaevola leaves 2400 d/m/gm -
 Ebra plants non-existent - looks like a concrete slab -
 the islands vegetation poor; General plant mostly burned
 brown - but 1 from old looks ok from the air.

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Locality ELMER Date 9-20-56
Personnel Palumbo - Seymour, Weather fair
Held, Lowman, JR Donaldson Water conditions

Radiation level(s) Bgd 30 c/m in counting room

Operations:

USS marsh arrived at 0800. Palumbo met ship at deep water pier and all hands "turned to" off loading equipment. All gear off by noon. PM spent in sorting + packaging or crating equipment for storage at the EMBL. Items were cataloged and lists will be completed tomorrow. Winch will be blasted and repainted. Starting switch needs attention.

Dr. Wolf of DIRM here for a few days. Talked with Al re Marsh results.

Frank repaired register on Scale "142 and put all probe equipment in one box - for shipping to AFZ if occasion arises.

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Locality ELMER Date 9-21-56

Personnel S. H. H. H. Held Lowman Weather Fair, rain showers

J. Donaldson, Palumbo Water conditions _____

Radiation level(s) Byg 30cpm

Operations:

AM - Continued storage & reading of shipboard material. List completed - in detail.

Session to discuss extra atoll and inter-atoll collections. Frank & Ralph will go to Bikini 9-22-56

(Sat) and stay until Monday afternoon 9-24-56

and try to collect at Nan, Bikini Id. and Fox. Held:

& Donaldson will finish Belle collections and look at Edna Saturday & work up those collections

and the Jean collections on Sunday, Monday -

All hands will work up Bikini collections, Tues

and Ponape is set for 9-26+27-56

Census held to discuss summary of "March" trip -

Packed for tomorrow's trips. Frank & Ralph look for sea anemones at South Beach. no luck.

Back in evening to complete odds & ends

AL leaves Sat. early AM - he hopes -

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Locality Belle, Edna, Bitum Id Date 9.22-56
 Personnel J. Donaldson, Held Weather cold + rainy at Bitum
Lowman, Palumbo Water conditions _____

Radiation level(s) _____

Operations:

To Belle + Edna w/ Curry + Schlocke. Collected fish + clams, vacuols, hermit crabs at Belle. Collected fish at Edna. Corals in French lead or dying. Deep hole in adjacent reef covered w/ green filamentous algae (*Rhizoclonium*).
 R.F.G. to Nan, Bitum via gorney bird (A-3) at 0810. arrived at 0955. Via Mboat and Duke to Bitum Id. for collections after making paired plankton tows - 20min. Collected marine specimens, fish, algae on western tip, ocean side, and various land plants + soil sample in central part of island. Most tall coconut palms have fronds knocked off clean, but a few have started to grow again. Found many papayas, breadfruit, pandanus, and a few coconuts. The vegetation in general was very lush, young coconut trees all over the island + the growth optimal appeared.

Soil Meter Readings -

MX-5'	1"	3'
ave	3mV	3mV
	B	Bv
max	6	5

Saw no invertebrates other than collected hermit crab and Heligons. Soil profile taken near photo tower. Took paired plankton station. Returned 4:30pm. Did fishing off pier collected bananaeada, also caught bait (butterfly fish)

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Locality Belle Fox (Bikini) Date 9.23.56
Personnel Lowman, Palumbos Weather Warm
Held J. Donaldson Water conditions _____

Radiation level(s) Fox above 20 m = 1 mR. S. - Blakeman Rad. Saf.
Operations: reported 30-90 ave. as high as 500 m/hr 1 week ago
at Belle Collection of Guam was processed -

at Bikini - to Fox where Plankton Tows were made
off Fox (200m) and in Teva Crater (50m). Fox is denuded,
on top soil, but found Muscard mounds at East end
of island about 3' high maximum and Scaloria
up to 2 ft tall - found 1 patch of Septoria growing
vigorously behind a bunker. Fish collection made
off center island lagoon - where algae also were
collected. No invertebrates seen either in lagoon or on
beach. Saw 1 small shark in seaward
tide flats, but missed him (geology pick). Halimeda,
Spongia, and Padina predominant algae on lagoon
beach pavement and coral heads. Water in Crater
looked milky. Took 3 gallon jugs full of water off Fox.
Lagoon plankton vs organisms vs activity. Islands west
of Bikini denuded of topsoil now are merely
sand spits w/ an occasional bunker or scrap heap
sticking up out of the sand.

Plankton tow off Nam - deep entrance. In at
4:40 pm. Cleaned up, chow + then coconut crabbing,
Hank Romisch, Gilbrath (mahr) and Dr. Medved. Got
small crabs - also picked up hermit crabs and
ghost crabs on the beach - ocean side beyond
the 70.

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Locality Belle - Billie (Nan) Date 9-24-56
Personnel Louisa Calombo Weather fair - rain
Held J. Donaldson Water conditions _____

Radiation level(s) Nan - 0.1-0.3 m/hr in tent area

Operations:

at EMBL Processing of Belle and Billie
Collections

at Nan. Poached in lagoon N. of Station 70
south of pier. Rough seas. Java catch. Call
1 clam, sponge + Poilopora. To Ocean side
for another jaunting - no fish caught. Collected
sea cucumbers, coral and sea urchins.
off and on. To northern grove for soil for
coconuts, sea shells, and Pandanus fruits.
Take off from Nan at about 1:15 pm. arrived at
2:25 pm; Elmer 3:00 pm. Stored gear and
samples, finished odds + ends of Belle. 2
and called it quits. Palumbo + Town
slightly "red" from fox trip, especially Town
and legs.

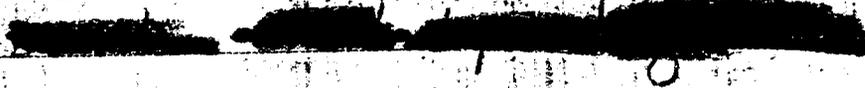
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Locality Flumer Date 9-25-56
Personnel Lewis, Held Weather warm
J. Donaldson; Palumbo Water conditions fair

Radiation level(s)

Operations:

Processed part of Biting collection.
Bulk samples: wet wt - fish - 420
How Id: arrowroot corn - scrubbed - 22675 gms
Papaya sketch - 452 - 2270
seeds 346 495
meat - 12,062



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Locality Elmer and Ponepe Date Sept 26 1956
Personnel Palumbo Donaldson Held Weather Warm-Fair
Lowman Water conditions Smooth

Radiation level(s) _____

Operations:

Departed ~ 0900 from Fred for Ponepe by Albatross.
Arrived Ponepe ~ 1100. In PM went to the outer reef
and poisoned a coral head inside of reef. Good collection
of fish, algae - also a sponge. Watched by 3 sharks during
part of collection.

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Locality Ponape - Elmer Date Sept 27 1956

Personnel Pelumbo Donaldson Held Weather Warm-fair

and Lowman Water conditions Smooth

Radiation level(s) _____

Operations:

Collected coconuts, iron nuts, tara, elephant ear, vanilla
Cellebiums. Picked up tuna from freezer and some coconuts
Shopped in the stores and visited the agricultural experim
room. Paired for fish in the river above the dam.
Got only one cel and Gambusia. Got some bananas for

Left by boat for the plane at about 1330 and arrived
Elmer at about 1835. Ate supper and stowed gear

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Locality ~~Pearl and Hermes~~ Elmer Date Sept 28 1956
Personnel Pelumbi, Donaldson, Held Weather Fair
Lowman Water conditions Smooth

Radiation level(s)

Operations:

Processed Bikini and Ponape samples. Ed and Jack went to Henig by H20 to collect coconut crabs, soil, sea cucumber, and plants.

Ed and Lowman went out by Gerrard intake and collected some zoeniths for Dick Wood, U of W.

Ed and Jack made preparations for departing to ZI until 1:00 AM Sept 29.

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Locality Elmer Date Sept 29 1956
Personnel Palumbo, ~~DeWitt~~ L. Swanson Weather Fair
Water conditions Smooth

Radiation level(s)

Operations:

Ed & Jack Departed 0430.

Ralph & FOL went by H-19 to Jersey to observe & collect rats, plants, and soil, at 0900.

Most of the large Messerschmidia and Scaevola bushes have been uprooted and run up. What remains however is putting on good growth and is green. Almost all of the Ipomoea vines are dead and the area formerly covered by this species is being taken over by Triumfetta and somewhat by sand burrs.

Many of the sand burr plants are dead with the result that the old rat colony area is sparsely covered by this species and the rats appear to have moved out of the site to a new area between the bunkers and the Mike-end of the island.

Sand burrs are growing profusely in this area and there is plenty of old lumber under which the rats can make openings to their nests. Only saw two rats - caught one. There are plenty of signs of rats in the area, however, although I doubt if there are as many as there were a year ago.