

UNIVERSITY OF WASHINGTON

APPLIED FISHERIES LABORATORY

SEATTLE, WASHINGTON

411106

Locality ELMER Date 12 FEB 58  
Personnel BENHAM, HEID Weather \_\_\_\_\_  
Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

ARRIVED 1830 GOOD WEATHER, SMOOTH TRIP.  
W/DR. HART (MTC) & BOB BILLINGS (P.D) ON THE SAME FLIGHT.  
7:1 HOW DOES THE MEETING, GREETING, BILLING, ETC.  
ASSIGNED TO BLS 107. RM 71  
MET CMDR STEINMEYER (JTF REPRESENTATIVE) AT KWRJ.  
HE WILL WATCH FOR OUR GROUP'S ARRIVAL & GIVE ANY NEEDED  
ASSISTANCE. TALKED OVER V.F. SUPPORT FOR BONGELAP WITH HART  
& STEINMEYER - THERE WILL BE A MINIMUM OF THREE FLIGHTS & POSSIBLY  
FIVE DURING THE STAY AT BONG.

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July 31 (Hardtack I)

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Locality ELMER Date 13 FEB 58Personnel KB EH Weather \_\_\_\_\_

Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

## Operations:

CHECKED IN. SAW RAY <sup>EMENS</sup> ~~EMMANS~~ (AFC). (WYNKOOP IS BE MAKING ARRANGEMENTS FOR WEATHER STATION). LSM SCHEDULED TO LEAVE HERE FOR ARRIVAL AT RONGELAP 24 FEB TO DELIVER GENERATOR TO THE PULWAS COUNTY WHICH IS SCHEDULED TO ARRIVE RONGELAP SAME DATE. OUR GEAR WILL GO ON THE LSM. IT WILL BE DECIDED LATER WHETHER KB & EH WILL FLY TO BIKINI & GO TO RONGELAP VIA LSM OR FLY TO KWAJ & MEET THE LST. DETAILED MAPS OF RONGELAP & ENIATOK IS. WERE READY & WAITING - NONE AVAILABLE FOR KABELLE IS. REQUESTED VEHICLE FROM CAPT THOMAS (71, J-3); DRG. 4C NOT ON HIS LIST BUT HE SCROUNGED A JEEP FOR US ON A TEMPORARY BASIS. SAYS HE WILL BE ABLE TO FURNISH VEHICLE TO GROUP ARRIVING ± 1 APR. SHIPPED "BOX #1" OF 4 PROBES VIA AIR <sup>FREIGHT</sup> EXPRESS TO FGL - JACK LIVINGSTONE HANDLED (MAY HAVE TO GO FROM TRAVIS TO SEATTLE VIA MOTOR TRANSPORT). STARTED PACKING RONGELAP SUPPLIES & EQUIPMENT.

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SEATTLE, WASHINGTON

RTP  
FOL  
aw

Locality ELMER Date 16 Feb 58, S.D.

Personnel KB + AH Weather \_\_\_\_\_

Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

Walked over seaward reef behind lab - no great changes since last June. There has been an influx of small cowries directly behind the lab & just a few feet from shore at low tide. The polychaete colonies are, if anything, more prevalent than they were in June. In some places they form single colonies of 10-15 ft<sup>2</sup>. Searched the quarry area for coral growth - found none. Found thousands of Notarchus (sea slugs) just south of the assembly area. They were being washed up on the beach.

Many visitors at the lab.  
"Chief" of Paint Shop told us of the sea slugs.

1958

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100

Locality ELMER Date 17 FEB 58, Mon

Personnel KB & EH Weather \_\_\_\_\_

Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

Completed packing gear for Rongelap. KB prepared fish samples for X-ray spectroscopy.

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Locality Elmer Date 18 Feb 58, TuesPersonnel KB + EJA Weather \_\_\_\_\_

Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

## Operations:

Bill Tammany (Rad-Safe) checked us out on compressor. Tested all valves, gauges & connections - everything in top shape. A-frame returned - painted ready to go. I.S. made plankton tows - deep entrance (2 hauls 1 at buoy 6, 1 at buoy 4) + off Elye. Using only #20 net, hauled 30 minutes about 1 mile off Clyde 1345-1415 hrs, then 15 min. 1440-1455 beside (south) <sup>channel</sup> D.E. Buoy #6, and 15 min 1510-1525 beside buoy #4 farther east, almost outside of pass; maintained position in a 2-knot current. Preserved Clyde & #4 buoy tows in alcohol & #6 tow which was apparently identical to #4, in formalin. Good quantities, but no large organisms susceptible to isolation for analysis by species.

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Locality ELMER Date 19 FEB 56 Wed

Personnel KB & SH Weather \_\_\_\_\_

Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

STUDIED CORALS IN REFERENCE COLLECTION. Collected 500  
Cucumbers on reef between ELMER & FRED. STARTED EXP  
TO DETERMINE HOW MUCH SAND PASSED THROUGH H. 970 SET IN  
HEAR PERIOD.

(Maj. Monaco)  
FLIGHT TO KUALA LAMPUR THROUGH J-3A FOR SUNDAY  
23 FEB. REQUESTED AERIAL PHOTOS OF KABELLE, KONGELAP,  
& BENEATCK THROUGH J-3.

MANY VISITS TO LAB & MANY OFFERS OF HELP FOR  
FISHING. ONE MR. BLESS <sup>IN CHARGE OF</sup> ~~FROM~~ NAVY BOAT POOL HAS DONE  
COMMERCIAL FISHING - HE WILL LOOK UP FGL & REP IN APR.

Requested that all reefs be in operation  
by 1 Apr.

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1002

Locality ELMER Date 20 Feb. 1958 ~~7/15/58~~ Th:Personnel K.B. & ~~GA~~ Weather \_\_\_\_\_

Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

## Operations:

GEAR FOR RONGELAP PUT ABOARD "ALTO."  
CLEANED ESTERLINE-ANGUS RECORDER - NOW OPERATING OK.  
IN THE FUTURE, WHEN THE RECORDER IS TO BE LEFT IDLE FOR  
SEVERAL MONTHS, IT WOULD BE BEST TO EMPTY A <sup>INK</sup> RESERVOIR &  
PEN. BORROWED A <sup>COUNTING</sup> TUBE FROM BILL TAMMANY FOR  
RATE-METER - OPERATING OK.

Took muscle and liver samples from a 2-foot black tip  
shark that Ed caught yesterday in a few minutes' fishing  
with rod & reel from shore. Of two caught & put in tank,  
one this one died, other seemed ok.

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022

Feb.

Locality ELMER Date 21 ~~APR~~ 58 Fri.  
Personnel KB & ~~EB~~ Weather \_\_\_\_\_  
Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

L AID ON FLT TO JANET FOR 22 APR. 0755.  
WENT AQUALUNGING w/ HENRY SCHLACKS. HE  
HAS A LIST OF NEEDED AQUALUNG PARTS & WILL  
SEND TO RFP NEED ALL NEW HARNESSSES

On reef south of Parry got 6 *Halothuria atra*; opposite  
coral pile got 1 *Actinopyga purpurina* & 3 small *A. cyathus*?  
Dried 2 *H. atra* & " " after cleaning, by hanging  
on clothes line by fine wire. Aaked sample of *H. atra* gut for  
counting & ~~of~~ X-ray microscopy.

Continued study of coral collection and cucumbers.



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6110. ...

Feb.

Locality 22 APR 58 Date 22 ~~APR~~ 58 Sat.

Personnel KB & GW Weather \_\_\_\_\_

Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

Got work last night - have to catch plane  
to Kwaj today 1200.

Arr. Kwajalein 1730.

Weather good with only traces of  
rain during entire stay at Eniwetok,

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all  
PRE  
EAT  
KB  
DS

Locality Elmer Fred Date Tues April 22 '58  
Personnel Weeks Palumbo Lowman Weather Windy Showers  
Water conditions Rough

Radiation level(s) —

Operations:

Arrived Eniwetok 0730 on flight 569. Palumbo's & Lowman's hold baggage lost between Hickam and PPG. Gave necessary info. to ~~sergeant~~ <sup>sergeant</sup> at PPG terminal. Arrived Perry by water taxi; had breakfast (lunch).

In P.M. went to see Col. Lucke. Had a nice visit. Transportation <sup>immediately</sup> not available for our crew since Col. Lucke had not received a request for such. Captain Thomas, transportation officer, trying to find a vehicle so we should be on wheels in a week or so.

Evidently funds are not available for canvas awnings but Col. Lucke and Ernie are trying to scrounge materials, at least for this job. Same situation applies to the Silverstein. Perhaps Al should be contacted to help out with this problem.

Rongelap gear stacked in middle of floor at lab. Started unpacking to obtain necessary gear for Rongerik.

Only two plankton buckets found so far. Hope we find the other two since we'll need them on both the plankton nets and the mid water trawl.

By passed Kwajalein on trip in to the PPG. No baggage inspection upon arrival. Things are really streamlined now so that facilities and services are easily obtained - including plane transportation around the Atoll.

ok'd by  
R.P.  
D.W.

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1111  
P26  
822  
KB

Locality Elmer Fred Date Wed. April 23 '58  
Personnel Weeks Palumbo Bowman Weather Windy-Showers  
Water conditions Rough

Radiation level(s) —

Operations:

Cleaned out laboratory shelves, deep freeze, and refrigerator.  
Defrosted the refrigerator.

The twenty cubic foot deep freeze on the front porch is inoperable and the freezer department says it is beyond repair. Appears that it would cost more to fix it than replace it. Checked w/ Ernie about getting it moved out of the way. AEC is working on the required steps to survey it.

Called Bud Shutes about the plankton bucket Kelley took for repairs. Bud said the bucket had been returned to EMBL. Couldn't find it so we went to the machine shop and found it there.

Unpacked Ronqelap gear and removed equipment and supplies needed for trip. Using all of the pressure sensitive tape. Using the wide mouth bottles. Washed up all of the dirty polyethylene bottles packed in the Ronqelap gear. Will use the washed bottles for her samples.

Checked out the Marsh-Walton plankton gear - mostly in good shape. Rearranged and packed for the Rehoboth. Have 6 used ~~1/2~~ meter plankton nets in good shape. Four have the bucket rings. Will use the used gear in high contamination areas. Have 7 new 1/2 M. plankton nets. Have 3 bucket rings and 3 1/2 M hoops. The meter block and nylon rope is in operating condition. Will have to make new bridles with the Pacor Tiller cable and the Nicol press. Have plenty of swivel snaps, eyelets, shackles and bridle rings. Looks like we're in business. 6 Hansen bottles in working order for the Silverstein trip.

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ai  
j.R.  
B  
B

Locality \_\_\_\_\_ Date April 23 continued

Personnel \_\_\_\_\_ Weather \_\_\_\_\_

Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

Ernie is working on the counting problem so it will probably be solved one way or another by the time the ship gets here.

F.G.L.

RP  
DW

P.S. Unpacked counting equipment from Marsh and started checking. Fixed one counting circuit in one of the scalers. G.M. tube for vcr meters not operable - probably went try to use it. Haven't checked the Avion tubes yet - Hope the argon filling hasn't perished out thru the mica window.

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200  
PR  
off  
LB

Locality \_\_\_\_\_ Date April 23 continued

Personnel \_\_\_\_\_ Weather \_\_\_\_\_

\_\_\_\_\_ Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

Talked to Bill Tammany and Gordon Jacks at Rod Seife. Were offered any electronics facilities at their outfit that we could use. Gordon has some underwater monitoring problems that we may be able to assist on. It's good when assistance can work both ways.

Picked up a classified document at 711 addressed to Doc. It will be of great assistance in our work at the PPA.

Bill Tammany visited the lab and checked us out on the air compressor. It is certainly a nice piece of equipment.

After lunch visited G. Bernier at the new Holmes and Narver Photo Lab. They have the nicest installation I've seen.

George promised to make a large print of the tern for Doc.

Called MATS terminal at Finiwetok and found that nothing had been done regarding our baggage. Hopped an L-20 to the terminal and supplied another set of information to the people there. Got a flight back to Perry as soon as we finished.

Have met a lot of the NRDL people here but so far no one is using the lab. They have a 30 foot trailer parked to the north of our building.

Visited Ernie in the evening and was asked about our transportation. Nothing available.

We are staying at one of the new large Barracks. These are really the ritz. Much nicer than the old barracks. We all have a four man room so ourselves with single level bunks.

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24  
26  
28

Locality Perry Is. Date Thurs April 24 '58

Personnel \_\_\_\_\_ Weather Windy

Water conditions Rough

Radiation level(s) \_\_\_\_\_

Operations:

Received following TWIX.  
USAEC, WASH. D.C.  
TO F.G. Lowman  
From A.J. Seymour

Collect Pire Hardrock open ocean water samples of one gallon each at six widely separated locations. Ship to Dr. John Herley, HASL, NYO, 60 Columbus Ave. NY 23, N.Y. End. Ref - BMES; AHS AEC - 938.

Will contact Col. Lucke this afternoon re. a ship to take the samples. Will take pre-survey plankton samples at same time w/ the one meter nets. See no particular problem except time.

Three lion fish, one stone fish, a puffer, and several butterflies are in the large aquarium. There had many visiting firemen wanting to see the fish.

Packed more gear for the Rehoboth joint. Col. Lucke's office called this AM and requested a meeting concerning the Silverstein trip. We don't know much about it but will try to help in any way possible.

Last Saturday we visited the Rehoboth at Pearl. On the way into Pearl they had decided to clean the bilges. One of the fellows forgot to close the seecocks and the ship just about sank at the dock. The engine room was pretty well flooded before the error was discovered.

PM. Just checked in w/ Col. Lucke and Cmdr. Wendell re. the HASL samples. Four of the samples in the south half of

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376

Locality \_\_\_\_\_ Date April 24 cont.  
Personnel \_\_\_\_\_ Weather \_\_\_\_\_  
\_\_\_\_\_ Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

Eniwetok Atoll in the open sea will be taken tomorrow by four ships. We will have to wait until later to get the other two samples.

Saw Gordon Dunning at lunch today. Said he had been down to visit us at the lab but we weren't home. He plans to visit us in a few days.

Commander STERRIT 7.3 came by this afternoon and checked on the requirements for the Silverstein. He had made out a letter <sup>to the Captain of the Silverstein</sup> based on a letter to DBM for the Watson survey. Except for minor details the letter was OK. The revised copy will be sent to the Silverstein w/ additional copies to Al and Seattle.

We would like to know where the Rongelap numbering system for samples left off so that we can start numbering our samples.

A 5:00 PM talk. Don out for a session with the bowling. Knocked off at 6:00.

RB  
DW

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Locality Penny Island Date Friday April 25 '58  
Personnel Weeks, Pelumbo, Lowman Weather Fair  
Water conditions Medium Rough

Radiation level(s)

Operations:

Checked out two nuclear scalars w/ anton tubes. Two out of three Antons marked good had plateaus. Have two more tubes in cans unopened. Hope these will last out the operation.

Had another house cleaning session. Lab looks pretty good now.

Some of the NRDL boys that are going to be using the lab showed up today. Seem to be a real nice bunch of guys.

Cleaned out awning tanks. Had small amount of oil



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Locality Perry Date Saturday April 26  
Personnel \_\_\_\_\_ Weather Fair  
Water conditions Medium Rough

Radiation level(s) \_\_\_\_\_

Operations:

Picked up three cans of water collected in open sea off Clyde- David, Leroy, and Glenn. 3 gallons in each sample. Will send NYC one gallon each.

Prepared two more cans and delivered to Cmdr Brown for water samples to be taken off Kunnia and Engebi today. They are sending a cruiser out to do the job.

Picked up 2 tons of steel shielding bricks from Wiley Williams for use at the lab. Scrubbed, dried, and stacked the steel.

Checked on lost baggage. Still no word <sup>Wayne Hatt</sup> Ed ~~Hatt~~ at AEC is going to put some pressure on to see if they can find it.

Late this afternoon the remaining three cans of water arrived at the Lab. Will rebottle and ship to NYC.

Ran backgrounds on Antons - 16-18 ym. Prepare more material for use aboard the Rehoboth.

Baggage was found today at the Pass and Badge Office. Evidently was sent on over to Perry Island as cargo. Next time we'll bring suit cases.

Went swimming for an hour late in the afternoon. Lowman got sunburned.

STEAK TONITE!

8  
3  
9

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206  
211  
215  
KB

Locality Perry Island Date Sunday April 27 '58  
Personnel \_\_\_\_\_ Weather Fair  
\_\_\_\_\_ Water conditions Medium Rough

Radiation level(s) \_\_\_\_\_

Operations:  
Ren backgrounds on Antons and checked w/ 1 gm KCl.  
Bkgnd on both counters 17 c/m, KCl counts were 217 c/min #1  
and 216 c/min #2. Good check.  
Unpacked lost baggage and got the papers work straightened  
out.  
Herds of visiting firemen today.

RF

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245  
\* NB

Locality Perry Island Date Monday April 28 '58  
Personnel \_\_\_\_\_ Weather Fair  
\_\_\_\_\_ Water conditions Medium Rough

Radiation level(s) Higher locally (not here)

Operations:

Checked in with Ernie and Col. Lucke about the awning problem. We are in somewhat of an embarrassing position. Both Col. Lucke and Ernie remarked about our not having a field operating fund. Probably should get some kind of an understanding with Al before the Silverstein operation or we'll be crawling into the woodwork again.

Tomorrow we are supposed to have a meeting with Col. Lucke and 3 operations concerning the awning. Col. Lucke is planning to have a navy repair ship do the job on navy funds. Ernie is ready to assign EMBL funds to the job if it can't be worked out some other way. Hope we don't get caught in any crossfire.

Checked out outboard motor. Plugs were fouled but everything C.K. now.

The 400 gallon tank is ok but rusty. The iron nut end bolts will have to be replaced.

Went to Jewett at 3:00 PM. Stayed overnight to collect rocks, soil, and plants.

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DJS  
KB

Locality Perry Island

Date Tuesday April 29 '58

Personnel \_\_\_\_\_

Weather Fair

Water conditions Medium Rough

Radiation level(s) \_\_\_\_\_

Operations:

Arrived back at Perry at about 9:30 AM. Went to lab and packed more gear for the Rehoboth. Checked on swimming problem. Many repair ship Hooper Island to do steel work and J-b will here. H & N do camera work. Took nuts and bolts off the big tank to get replacements. Cleaned up the lab and processed the Vener plants. Had a short meeting in afternoon with the oceanography group.

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JSS  
K.B.  
p.120

Locality Parry Island Date Wednesday April 30 '58  
Personnel \_\_\_\_\_ Weather Fair  
\_\_\_\_\_ Water conditions Medium Rough

Radiation level(s) \_\_\_\_\_

Operations:

Had a meeting with most of the Navy people concerned with the Wahoo shot. Lasted about two hours. All phases were discussed and planned including the recovery of blast and pressure gauges from the target array, pre-shot oceanographic work, re-entry of ships into the target area, and the post-shot radiological work-us. Everything appears to have tail remarkably well and it looks as if a complete set of data might be gotten.

Gathered up supplies - got a two  $\frac{1}{2}$  ton truck for the job. Got bolts & nuts for the tank, camp cots, two red devil fans with snakes and a 50 gallon pump.

Arranged to have our things picked up by J-4 in afternoon. Went to 126 and got all boxes onto the front porch for pick up. A fork lift loaded all boxes and the tank onto a trailer along with 450 pounds of lead shot in bags that was loaned to us by army signal corps boys. Duckworth's spectrometer doesn't have a shield so he will build one w/ lead shot in a box. The spectrometer is going to be at our disposal for our hot samples. These people are really nice to work with.

Got some of our personal things ready to board ship.

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PROJ

Locality Perry & Rehoboth Date Thursday May 1 '58  
Personnel Weeks, Palumbo, Lowman Weather Rain and more Rain  
Water conditions Medium Rough

Radiation level(s)

Operations:

Took gear out to ship and started installations. Didn't have marine male plugs so couldn't check out the electronic gear. Installed counting gear in lower lab, chemistry lab in upper lab. Started putting midwater trawl net and plankton nets together. Returned to Perry Island at 4:30 PM.

RP

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Locality Parry & Rehoboth Date Friday, May 2 '58  
Personnel Weeks, Palumbo, Lowman Weather Fair  
Water conditions Medium Rough

Radiation level(s) ~

Operations:  
Went to ship at 0930. Finished rigging mid water trawl with bridle. Rigged new bridles for plankton nets. Are going to use a twenty five pound weight on the 2 meter nets. Fixed chem lab with plywood base and installed framework pumps etc for chemistry work.

RP

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Locality Parry-Rehoboth Date Saturday May 3 '58  
Personnel Lowman, Weeks Weather Fair  
Palumbo Water conditions Smooth-Medium

Radiation level(s) #1 18.2 c/m #2 16.7 c/m

Operations:

Took water taxi to USS Rehoboth for pre-survey. Boarded at 9:30 AM after being squared away for berthing we got ready for sea and work. Continued with setting up chem lab and securing counting equipment - ship went out of lagoon through the wide channel. US Hydrographic group spent most of day setting out current drogues, taking BTs and trying to get Nansen bottles out - which difficulty delayed the cast such that our operations were delayed also. Late afternoon at 5:00 PM we ran our first midwater Trawl Test. The deep sea anchor wind on the deck was used for this operation. The wire cable was run back along the boat deck to the 15 ton crane and "fairled" to the bridle. The crew for this operation numbered a score or more. The boom was maintained at 90° angle to the starboard side and the cable was let out to 100 fathoms. Light tow was taken with a BT and registered on 160 ft. Net hauled in at 5:35 PM and sample included one small *Squilla* crab, one piece of cardboard and scrap of unknown origin - no fish or plankton. The first operation was slow and ragged and the cable went under the ship's port side. Steering to starboard corrected this and turning off the starboard screw eased the captain's mind.



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Locality \_\_\_\_\_ Date 5/4/58 (P.2)  
 Personnel \_\_\_\_\_ Weather \_\_\_\_\_  
 \_\_\_\_\_ Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

Type of Haul
T - Midwater Trawl
P - Plankton

Samples prepared for counting -  
 T-1 Sta # 15 (Depth 580ft)

Total water volume filtered = 565 ml (saved)  
 Plankton plate = 5ml  
 P.W = 2.360 gms

T-2 Station # 25 600ft depth

Total vol plankton = 15ml  
 water = 310ml (saved)

Plate made - 2 coarse filters No. 1 Whatman  
 Total gamma { 1 MF (0.45μ)  
 " " { Plankton entire

P-1 Sta # 7

Plankton vol. 18ml ; Total Ho - 105ml

Plates made - 1 plankton  
 Total gamma - MF (0.45μ)  
 plankton entire

P-2 Sta # 12 Plankton vol. = 50ml water = 140ml

Plates made - 1 plankton  
 Total gamma - MF (0.45μ)  
 " " Plankton portion

T-3 (end 2315) 580ft depth total plankton - 60ml

17 fish (saved) } saved  
 I kel larva }  
 lots of shrimp }  
 MF + H<sub>2</sub>O not saved

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Locality Rehoboth - West of Ent. Aull Date Sunday May 4 '58

Personnel LOWMAN, Weeks Weather Fair

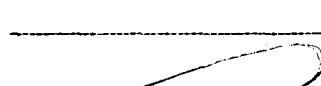
Palumbo Water conditions Medium Rough

Radiation level(s) ~ 2) 16.4 c/m ∫ = 225-252 c/m total

Operations:

~~Prepared~~ Prepared second trawl net in case of failure of first. Made first trawl haul in water at 11:44 AM. 350 fathoms cable out at 11:30. Started retrieving at 12:00 AM (noon).

1216 net out of water <sup>5650' H<sub>2</sub>O</sup> side of plankton (fix - start <sup>TIME</sup> #18.4 N 162-04.3 E)

 track of trawl <sup>TIME</sup> #1213 # 11:20.6 N 162-07.3 E (Station 15)

500 feet deep (600' at 550) (82° surface) <sup>See plankton used on plate.</sup>

thermocline at 400 ft. - ~~1322 ft~~

2<sup>nd</sup> Trawl haul in water at 12:52. 350 fathoms out at 1305. (Station 25)

~~1335~~ 1416 started to haul in. 14:30 net out of water.

59° at 600' thermocline at 300'

82° at surface towed at 5 knots

One fish and 15 cc plankton. 1307 net in water 11-22.3 N 162-02.7 E

Plankton #1 station 7	1/2 meter net	1318	11-23.0 N
net in water	3:40 PM		162-02.0 E

cable out (1500')	3:55 PM	1330	11-23.9 N
out of water	4:15 PM		162-01.4 E

surface temp	84°	1340	11-24.8 N
322'	84° (thermocline)		162-01.8 E

> 900'	(temp at 900' 51°)		-2-3 N
			162-02.2 E

18 cc of plankton		1400	11-24.1 N
			162-02.6 E

Plankton #2 Station #12	1/2 M net May 4	1416	11-28.8 N
1945 - in water	680' deep 58°F		162-01.8 E

1952 - 700' wire out	360' thermocline	1439	11-25.4 N
2115 - started retrieve	Surface 81.8°		162 00.2 E
2120 out of water			

3<sup>rd</sup> Midwater trawl in water 22:05; 350 fathoms cable out 22:23; started in 23:00; surface 23:20. Surface temp 81.6, went to 575' at 62°, thermocline 500-400 feet.

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Locality USS Reliance both - Ocean Date 5 May 1958 MONDAY  
 Personnel LOWMAN, WEEKS - PALUMBO Weather Fair  
 Water conditions swells

Radiation level(s) #1 - 21.6 c/m ; #2 - 15.6 c/m ; Total gamma - 256 c/m

Operations:

P-3; station (6-7) Some error due to drifting

in water at 1423 stopped 1427 w/ 700' wire out. BT

showed depth as 645' T<sup>o</sup>F. Surface 82.3

Thermocline at 300 ft. 645' - 59.4°

started in at 1515 out at 1518

Total plankton - 23 cc ; H<sub>2</sub>O filtered - 104 ml

Plates made & 2 totals taken

(Hydro Pers)

Water Samples - from Nansen casts made by USN Hydrographic

station H-6 to H-7 made two casts - during Office

plankton tow (P-3) - (About 50 ml stored in PE bottles)

Hydro Bottle No. depth (to be determined later)

	↓	167
		17
1st Cast shallow		166
		151
		168
		165
		14
		156
		32
		20
		28
		401
2nd cast deeper		26
		18
		155
		16
		25
		164
		157

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Locality

Date

5 May 1958

(P.2)

Personnel

Weather

Water conditions

Radiation level(s)

Operations:

P-4 700' wire - BT did not work Sta # <sup>H-18</sup> ~~7-18~~  
in at 1950 ; <sup>out</sup> out at 1957 ; in at 2032 to 2035  
P volume 10 ml H<sub>2</sub>O vol 70 ml  
Tried 2 MF 5 9/16" filters in tandem, one above  
the other. This did not work since bottom filter  
could not drag the water through. So the MF's were  
separated and drawn separately.  
Plates made - 1 plankton (approx 5 ml)  
total samples 1 - 3µ MF ; 1 - 0.45µ MF

The mid water trawl was not used because the Hydro  
personnel had trouble with the Nansen casts earlier and  
did not finish until late morning. We had scheduled the  
haul for 7:30 pm because our only night haul was much  
better than our daytime hauls.

Much time has been spent checking the spectrometers  
for efficiency and stability. The instrument is very  
stable and reliable and the efficiency is lower (than  
at the Seattle Lab, by almost 50% - but is getting  
better as the new tubes warm to their task - FGL  
is happy about the whole thing. We can get some  
idea as to the early fission products present - We ran  
a spectrum of one plankton sample collected today & found  
a small peak at position 2 (Co<sup>147</sup> maybe).

Locality \_\_\_\_\_

Date

5 May 1958

(P.3)

Personnel \_\_\_\_\_

Weather \_\_\_\_\_

Water conditions \_\_\_\_\_

Radiation level(s) \_\_\_\_\_

Operations:

A 16<sup>th</sup> dolphin was caught by Photographer Le Randolph while trolling at good speed. Samples of muscle and liver were taken and total gamma counts showed no significant activity. Bulk samples were dried and stored.

Procedure for Samples collected

### Plankton

1. Take total volume
2. Remove Sec for B-plate and count dry weigh at EMBL + record + package
3. Filter aliquot thru coarse screen or filter paper and total gamma wet - Dry + save (weigh ~~paper~~ <sup>sample</sup>)
4. Remainder, if any, for storage in 50% alcohol
5. Filter through MF paper for microplankton  
Total gamma wet paper - store rash for Beta -
6. Take vol of water - store or  
do Na<sub>2</sub>CO<sub>3</sub> ppt + count 2-10 ml ppt B + ~~sample~~  
→ for hit stuff - Count MF Paper of original ~~filters~~ <sup>sample</sup>  
also + store remainder not used for ppt  
See UWFL<sup>46</sup> for details

also  
for  
Nansen  
Samples

Fish

Liver } B-plates dry + store remainder  
Muscle } total &

Small fish - total fish - gamma or Beta

∴ Act May have some ideas re homogenizing -

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7696

Locality Rehoboth Date 6 May 58  
Personnel Louman Weather fair  
Water conditions medium rough

Cactus 0615

Radiation level(s) Diegoe flag pulled up at 13:15 - 200 mc/hr - this is  
airborne fallout & has not touched water - am saving flag for future  
Operations: 100.0

plankton filtered thru fine brass screen & 45  $\mu$  millipore  
filter. 1/4 cc placed for  $\beta$  counts - too hot to count. Took a 2 mg.  
for decay curve. Decaying with  $T = 1.03$  rate. Rest of plankton  
too hot for  $\gamma$  spectrum. Too hot subdivided. Very distinct  
& peaks found.

P-7 May 6 19:53 in water, 19:56 700' cable cut, 20:33 started  
taking in; 20:36 out of water, 300 cc plankton. Surface temp. 81.3°;  
660 foot depth w/out 58°; thermocline 260'. 1/4 cc of  
plankton too hot for  $\beta$  counts. Subdivided. Decays with  
 $T = 1.03$ . Large plankton, 45  $\mu$  plankton, and water sample  
saved. One 1 1/2" section just in plankton. Run & spectra on  
all fractions.

Finished at 1:30 AM May 7,

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SEATTLE, WASHINGTON

EMBL →

Locality AGS-50 - Parry \* Date 6 May 1958  
Personnel Welander - INCKs \* Weather Fair  
Palumbo<sup>+</sup> - LONNER Water conditions NORMAL!  
Duckworth - Severance

Radiation level(s) \_\_\_\_\_

Operations:

\* Transferred from Rehoboth to YTB at 1230 in fairly rough water. Remained aboard the tug until 1400 and then transferred to ARS. Remained on it and taken to Lagoon for transfer to LCM and Parry Island. Just made mess hall in time to close the door at 1920. Welander seen for first time bent over a sizeable dish of veal outlets et al. FGL stayed aboard.

Welander arrived Monday, May 5<sup>th</sup> at 1000, checked thru security, billating, etc., etc. Finally landed in Barracks 460, room 5 - reserved for U of W. Worked on 1957 Fish - Enewetak report in afternoon, at the lab.