

Memoranda



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XIV.

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E-510 U.S. Nat Museum

Washington, D.C.

20560

St. Louis 1973

Mid Pacific 1968

Mexico City 1968

Chicago 1969

La Jolla 1969

Philadelphia 1970, 1973

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Hawaii - Mid-Pac.

1968

Aug. 15 ~ Thurs Clear, mild

Lv. Friendship Airport

United Fl. 51 @ 9³⁰ AM

via L. Angeles

Ar Honolulu 2:40 (3¹⁵ PM)

Met by Johnsons - to Makiki Hts

shopping. Dinner with

Johnsons, incl. A.K.J. - a fine

23 hr. day.

Aug. 16 ~ Fri. - clear + mild - Honolulu

With Johnsons by Royal Hawaiian
Air Serv. (2 engine Cessna) plane

to Kamuela on Big Island. Brief
stops at Lanai and at Upolu (n. tip
of Big Is) en route. From Upolu

flew SE along high cliff coast
(1500' ±) past mouth of

Waiananu Valley and Waipi'o
Valley - Then inland (SW)

Drove to Mauna Kea
Beach Hotel on coast
- fabulous new installation by
Eastern Airlines + Nelson Rockefeller.

Called Howard Powers, Director
of ^{Vol.} Observatory. Kilauea's
Halemauiau now inactive - at
least temporarily. Many felt
sharp quake here today. Could
resume fountaining any time.

Asked re C.K. Wentworth - now
living in apt in Hilo with Juliette.

→ Drove to Wood's ranch
- Pohakoa, near Paauilo - for
drinks with large gathering.

Returned to hotel for dinner
- all very plush and (no doubt)
very expensive.

Had swim - beautiful beach
clean sand - saw only one fragment

of coral - few minute gast. on
lava at end of beach - no
barnacles or rock oysters seen

Kamuela,

Aug. 17 - Sat - clear mild - Hawaii

Drove back to Waimea and
on ENE to coastal area at Honakaa,
thence along coastal road SE+S
to Hilo where rain began.

Visited C.K. Wentworth, now
77 yrs and having troubles with
his mid section - fore and aft;
had wheelchair - usually up only
for about 2 hrs. daily - cared for
by Juliet. Claims memory not too
good but seems alert, talks well
talks rather unkindly to J. - can
read but does no real work.

On to Kilauea in variable
showers - torrential at times. Crowds
lined up for food at volcano House
- with Johnson foresight we had
brought picnic lunches in ice box

- good view of Kilauea Iki crater
that is now floored with fairly
smooth surface of black lava
- only distant view of adjacent
ash deposit remnants of partially
burned and buried forest - rain
heavy.

On to Halemau mau - steaming
but solid - nearly to top - no pictures
in drifting mist, steam and
rain.

Stopped at Vol. Laboratory but
all locked on this Sat. afternoon.

On steam vents and sulphur Bank.

Rains continue - abandon
plants - return on saddle road
(between Mauna Kea & Mauna Kea).
- via coastal road to Mauna
Kea Beach Hotel.

Dinner with Bob & Sue Johnson
and John & Sharon Walter (sp.?)

Aug. 18th - Sunday - Kaimuela, Hawaii

clear and mild.

Drive around coast near
hotel - extensive area to be
developed behind nearby beach, etc.
Had swim and lunch.

To airport at Waimea
to meet Woodson and take
flight in one of his gliders -
a sail plane. Up over 6,000'
to lower edge of cloud mass
on nearby rise - towed aloft by
single motor plane - sail at
55-60 m.p.h. - delightful quiet!
Tried controls - back on stick to
elevate, forward to descend
- left or right to bank - plus
pedals if needed. Stayed up
35 min ±

Returned to Honolulu in late afternoon. Dinner at home with Johnsons

Aug 19, Mon - Honolulu - fair, mild

Our ship, R/V Alexander Agassiz arrived yesterday, acc. Castle & Cooke - Prior. 9
Exam. by Dr. Moffat
visited ship - lunch 2335 Makiki
Called Va. Lennox.

Reported to ship at 4³⁰ PM
(see p. 58)

Aug 20 Tues - Honolulu - clear, warm

To Kilauea with Newman, Rosenblatt, Allen & Allison for visit with Kridler (Eugene) re plans for stop at Pearls & Hermes

OK to collect some living coral & mollusks, in addition to ls. samples & sediments - incl. shell-bearing sands at top beach

On to Coconut Id lab. after picking up George Losey.

Met Alison Kay - and Vera Fretter - on launch

Met Blankohn and Bruce Miller, Vernon Brock and others.

Returned to ship 4⁴⁵ after beer with Loseys.

Dinner with Newman, Allen & Allison at Lotus.

Aug 21, Wed. - Honolulu - pthly cloudy warm

Shopping and to Bishop Museum in early AM. - visited with Ed Bryan re Pearls & Hermes plan & re B.M. Fiji types
- Keep all moll. spec. as long

as required, Met Miss
Bishop. Washington, the
Registrar not available

Picked up by Johanna
Resig - to Univ. for conf
on her Ms.

Conf with Ralph Moberly
and his student ^{Don M. McGuire} who has
finished excellent MS thesis
on clastic materials between
vol + ls. sect. on Midway
- this to be part of Moberly
chapter, signed by McGuire,
possibly with Moberly.

One of Moberly's ^{grad.} students,
Steve Hammond, is studying
paleomag of clastic elements
in Ewa ^{non-vol.} cores and may
add some Midway material
(gave OK)

Malahoff, Alex away;
talked briefly with Murli

Marghinani - none of existing
Midway cores fresh enough for
high temp. + pressure tests. If
we ever get better material
he will be interested.

Called Macdonald - not home
Talk by phone with Dan Davis
- in chge USGS Wet Res Br.

Lunch at Willows (fine
Japanese-run restaurant)
with Resig + Moberly

Woollard has left for Cong.
in Europe

Visit with Adm. Thomas.
Taken by him to Keehi facility
to see cores. Midway cores not
attached - only Ewa cores. Arr
to move Mid. cores to separate
room in same bldg. Thomas
will handle. No move to
Pier 18 in near future

Ret to ship for dinner

Called Macdonald
and Bill Craddock - Bill
away - talked with Louise
work on charts of
Mid-Pac rpts in evening.
Bill Craddock returned call

Aug. 22 - Thurs - Honolulu -

Fair + warm

Visit to markets with
Newman in search Samoan
crabs (barnacle study)

Returned to Coconut
Id. for informal seminar
on our trip.

Visit with Reese - had
met on Heron Id in May -
studied of Coconut crabs.

To Alison Kay's home
for beer and conversation
after brief tour of
University grounds.

To Johnsons for
cocktails ~~with~~ - Newman,
Allen, Allison (also dinner),
Coker, McConnaughey,
Rosenblatt.

Aug. 23 - Friday - clear, warm

Reading and notes - ETD
advanced by need for welding,
etc. on ship. Dorothy down to
see us off about noon. Sail
at 11 PM.

Aug. 24 - Sat. - clear, mild, calm

Set up procedures, etc. as
ship heads WSW. First watch
with Allison 8-10 PM. - 2 hrs
on, 8 off.

Aug. 25 - Sun - clear, warm, calm

6-8 AM watch with Allison - he
took B.T.

4-6⁰⁰ watch with Allison
-continue WSW toward
Horizon Guyot.

Aug 26th - Mon. - fair, warm, calm
0200-0400 watch with
Allison

Dredge haul #1

On across ENE end Horizon
Guyot - turn N, put out rock
dredge - about 0900 to dredge
up the windward slope of
Horizon G. - between eastern
tip & first bulge - closer to
latter - no recovery, prob.
didn't get on bottom (1900m)

After noon - put in otter
trawl near top Horizon Guyot
pick up small but
varied fauna - deep sea
fish, stalked crinoid,

gast. (with hermit crab)
other gast, ophiuroids,
holothurians, etc.
- caught 17 polycystic white
tip shark

Put out 6 free vehicles
(^{deep} night lines) to be picked
up 10 hrs ± later.

Had duty with Allison ~~#~~
2200-2400

Aug. 27 - Tues - fair, mild, calm

Return to pick up free
vehicles (after small but
diversified mid-water trawl)

Recovered 3 free vehicles
- duty with Allison 0800-1000

Recovered 4 ^{5th} vehicle 1045

caught small blue shark
Failed to find 6th free
vehicle (taken by shark?)

have spare for
few amphipods in bind cage.

Arceev functioning - ran
traverse preparatory to
2nd attempt to dredge
windward slope (+ top)

of Horizon Guyot?
Duty 1200 - 1400?
Dredge (rock) down at 400 ^{pm}

Dredged 1180 - 1090 fms

but recovered only 1 chunk
of Mn. pavement, (bivalved
structure) and numerous small
pebble-like pieces of Mn oxide.

A few pebbles and inside of
pavement chunk are brown
in color & may represent
altered vol. rock. No trace

of fossils ¹⁸⁰⁰⁻²⁰⁰⁰ ~~1800-2000~~
Duty ~~1200-1400~~ (large)

Put in otter trawl on
top of Horizon Guyot.

Aug 28 - Wed - fair, mild, calm

* Duty 0700 - 0600 - hauled in
large otter trawl - misc. invertebr.

but no fish. - frag of paper
nautilus egg case, trochid,
Carolinias, opiroids (2 spp)
ech. fragment - large (2-3")
piece pumice with barnacle
& worm.

* Something evidently fouled
up trawl - to return and
rerun same course. Hauled
again as far as fish are
concerned (1 small one); 2 stalked
crinoids - one only about 1/2" long.
& Caroline, Diacria, trochid.

Trawl placed (and replaced) in
water for third try (smaller
otter trawl) - appeared have
picked up load but lost
trawl when starting to retrieve.

Duty 1400 - 1600

Preparing for rock dredge
over break in slope - western
end of eastern section

Dredge haul #2

Aug. 29 - Thurs - fair, mild, calm

Recovered 1 piece pumice

2-3" with barnacles + forams
& tube (pipe) of foam ooze gray.

Put out midwater trawl
& free wheeling camera

Duty 2400 - 0200.

-recovered camera - trawl not
rich

(Put out rock dredge with trawl
behind.

Duty 1000 - 1200

" ~~1800~~ ²⁰⁰⁰ - 2000
Complex Arcer patterns

Dredge hung up on break in

slope (never did reach ridges

of debris? on top) - finally freed
by stopping engines and pulling

with winch. Dredge packed

with manganese veneered

nodules of dark flint - largest

nodule 6-7 feet long! Edges

"weathered" light tan (cf.

Puerto Rico trench nodules).

Small pipe dredge behind

rock dredge contains forams

(-U.K. and later acc. Allison).

(-Glebo⁺truncana)

this first K. from Horizon

Guyot. Except for large size

nodules are like those dredged

from the Puerto Rico Trench

by W.H.O.I. - see Todd rept.

Duty 0400 - 0600 ?

Aug. 30 - Fri - partly cloudy, mild, calm

Other trawl brings up very little

Head for Hess Guyot.

Arcer in water, part of time

Duty ¹⁶⁰⁰ 1800 - 2000

Aug 31 - Sat - fair, warm, very calm

Duty 0200 - 0400

Approaching Hess Guyot
from E-NE. Ran survey

indicating guyot about twice
as large as mapped.

Duty 1200-1400 ^{midwater} trawling
Sept 1st - Sun fair, warm, calm

Rock dredge
#5

~~24~~ Rock dredge up at
0600 ± ma. nodules and some
limestone - with corals and
other fossils. Head ^{to} north end
Duty 0800 - 1000

Put over Agassiz (Sigsbee same)
trawl, dredging south over
guyot, just above bottom
Varied recovery, many gastropods
1 Pseudeamusium, Verruca &
other barnacles

ArceV run in early PM;
rock dredge out

- duty 1010 - 2000

Agassiz trawl, night lines
etc.

Duty 0400 - 0600
Ran rock dredge

Dredge
#6

rev eastern rim - recovered
ls. with Vermicularia

Sept. 2 - Mon - pty cloudy, mild, calm

Picked up night lines & traps and
head west for "Hamilton" Guyot, an
area not previously dredged.

Practically no middle or deep
water trawling previously done
in Mid-Pec Area. gear used for
fishing has been successfully
used else where - paucity of
returns here means simply - very
little fish life in area

duty 1400 - 1600

Sept. 3 - Tues - clear, mild, flat calm

Duty 2400 - 0200 - continuing
west toward "Hamilton" Guyot,
awaiting final answer from

'Scripps' Director on plan to
refuel at Wake Id.

Duty 10⁰⁰ - 1200

[Reviewed "Pygmaea" file &
discussed plan with Newman
- our paper complete in Dec - all
the barnacles - fossil + Rec. then
to Newman]

Trawling

Duty 1800 - 2000

good recovery in other trawl
- many echinoids, barnacles, etc

Sept 4 ~ Wed. - clear - warm - calm

and trawl in same area
not too good - starfish, squids
few dentalia

Duty 0600 - 0800

Cross to NE edge of
guyot ("Hamilton II") - to use
~~rod frame dredge~~ + sed pipe

boring pipe dredge.

Recovered large (6" ±) manganese-
covered stromatopora, 2 pts of
glass sponge, small pieces
white chert + several sacks
of solid mn. nodules, pieces
of ~~gray~~ ^{white} ls
small ~~pieces~~ ^{pieces} of ls. + numerous
pieces of ls.

Reassemble pipe dredge
to run over break in slope
on windward side farther
to north. - foam (sl white + buff)
+ ls. with mn coating

Duty 1600 - 1800

Midwater trawl out, ~~plus~~
after set lines

Sept. 5 - Thurs - warm, clear and continued
flat calm.

Duty 0200 - 0400 - difficulty
finding bottom at 0200 and
this may have been when

Dredg #7

Dredge #809
(pipe)

midwater trawl reached bottom; when hauled in later contained rich haul of non-~~siliceous~~-scleractinian corals (4'), numerous shrimp, fish, etc. (acted like otter trawl)

Duty 1200-2000

Picking up (2 of 3 remaining) get lines. Off for buoyot "Agassiz" Otter trawl out

Duty 1000-1200

Hold up by a poor hydrophone line caught under ship [Full inspection of Arceev by Barrow Thomas. This fantastically complicated apparatus built by Harold Sammulis & Thomas.]

Sept. 6 - Fri. - ptly cloudy, warm, calm
Continue toward

Buoyot "Agassiz"

Duty 0800-1000
1600-1800

Dredge #10
Cross Agassiz from E, turn + recross to NE Put out rock dredge - across top-down over edge to windward & reversing on course to south - long haul with only (apparently) minor jerks. Brought in richest haul yet - a wash tub full of calc. siliceous rocks - with rudistids, Nerinea, sharks tooth (Carcherodon), manganese nodules, chert.

Put out otter trawl

Sept. 7 - Sat. - fair, calm, mild

Duty 0400-0600. Otter trawl up - poor pickings - largest item a 6x4"x1/2" ± chunk of water logged & much bored wood

Dredge #11

Put out rock dredge on the north side at depth of 1130 fm. ~~start~~ This well below the break in slope; start dredging up slope to south at 0755. Fair recovery rudistids, etc

Duty 1400 - 1600
Agassiz trawl out
Fair return

Sept. 8th Sun. ptly cloudy, warm, calm

Dredge #12

Duty 0000 - 0200 Agassiz guyot
Rock dredge out - leeward side contained one piece pumice (with small siphoncolids) and a rather rare fish 12 long!

[2 guyots called A. Agassiz (west) & L. Agassiz (east)]

Put out mid-water trawl
Trawl started in 1200

Duty 1000 - 1200

Fair return from trawl

Duty ~~1800~~ 2000 - 2200
on way to Wake Id

Sept. 9th Mon. mostly fair, warm, calm

Continue toward Wake Id

Duty 0600 - 0800

On to "510" Guyot for days concentrated drilling & trawling. Duty at 1600 - 1800
Start rock dredge windward side

Sept. 10th Tues. fair, warm, calm

Duty 0200 - 0400

Dredge #13

Rock dredge hangs on windward edge after several good jerks - freed after 7000 lbs with such a jolt Newman figured we had lost dredge - no more signs of life so heeled in - dredge OK - with one small (1"±) piece of basalt! (in small pipe behind) (13

Dredge
14

- dredge put out again just
inside marginal rise - recovered
nothing!

~~Midwater~~ Agassiz trawl in
water about 0900. Recovered
3 small fish and few shrimp.
- this area is a biological
desert! Duty 1200-1400

Run Agassiz trawl
over same course - poor return

Some difficulty in
navigating to high (lee) point
on S10. Finally put out
pipe dredge to dredge up top
of lee slope. Duty 2200-2400

good recovery of iron nodules,
igneous pebbles, Stromatopora.
Some small black pebbles
well rounded + polished.

Head for Wake Is.

Sept. 11 - Wed. - mild, calm, clear

Continue toward Wake
Duty 0800-1000. Examined
last dredge haul (# 15)

Many manganese-covered
volcanic pebbles (vol. brown,
weathered), some ls., some ss,
chert + foram material - forams
may occur in chert - look
Tertiary to Allison. Few barnacle
plates (Rec.?) and one mitrid
shell with dark brown apex
filled with sediment - certainly
a recent species - not contamination
from dredge or screen.

Duty 1800-2000 - on toward
Wake, running Arceer

Sept 12 - Thurs - ptly cloudy, calm, mild

Duty 0400-0600; Ar. off
Wake 0530±. Unable to
get fuel from tanker until
tomorrow noon.

Newman + Dana off

14

to try scuba on lee-side
of reef - found reef essentially
dead - scattered small heads
of living coral - no rich algal
growth - some gray sharks. (with
limited air available did not
try scuba)

Around to windward side
- some live coral - some big
heads - 10 ± genera - good
10 fm. terrace - scuba work
cut short by aggressive gray
sharks.

Put out mid-water trawl
Duty ~~1200~~ 1400 - 1600
Richest haul yet

Sept. 13 - Fri. - pty cloudy, mild, calm

Duty midnight - 200
Put out midwater trawl
(Isa co - field) with 5000 m. wire
Comparatively poor haul. Also

3 free vehicles. One w/
with record size hagfish
(slime eel)

Tie to tanker to
take on fuel & water
Duty 1000 - 1200 -

Pick up remaining free
vehicles (good recovery) &
head for "Darwin drowned
atoll" Duty 1800 - 2000

Sept. 14 - Sat - squalls - mild -
calm

Duty 0600 - 0800
Continue toward "atoll"
Duty 1400 - 1800

Reach elevation but it proves
not to be the "atoll" - find "atoll"
by dead reckoning - does not have
raised rim. Put out pipe
dredge

Sept. 15th - Sun - clear, mild, calm

Duty ~~midnight~~ 0200 - 0400

Dredge 16

Pipe dredge brings up large (10"±) plate of ls (?) coated heavily on both sides with Mn. + numerous small Mn pebbles, etc. Some ls with peculiar organic bits (burrows, etc.), pieces of gray chert. - K chert, younger ls?

Small living barnacles on slab + ophiuroid. - All told not a rich haul. No vol noted

Put out mid-water trawl

Duty 1200 - 1400

Large Mn slab from Dredge #16 has no distinct median layer; thin film of lighter material is close to 1 side of slab; no chert center - all black is Mn oxide

very dense

Allison suggests slab may have formed over fine calc sed + then overturned + opposite side coated with Mn. Newman - noting that living forms occurred on both sides - suggest fines may have been washed out from under slab, thus making both sides available for living animals (+ avoiding necessity of overturn).

Good return of fish & shrimp from mid-water trawl; possibly 20 spp shrimp acc. to Allen (including 1 shallow water sp)

Returned to "atoll" and made 3 arcer runs across its narrow rimmed peak.

Apparently a hard and somewhat uneven crest. Has an atoll shape but...

Dredge # 17

Dredged (rock) in central area + over the edge; back up slope. This small seamount really is a guyot + stands higher than others in the Mid-Pac mts. Since it does have a fairly well developed rim it probably was an atoll - built mainly by rudistids

Darwin drowned atoll

171° 03.2' - 171° 03.4' U.E

22° 01.8' - 22° 04.5' N

Duty 2200 - 2400

We recovered a heavy load of Mn. slabs and others crowded with rudistids - these appear to be in place and attached valves can probably be worked out. Block is 18" ± across. Large tube may be Vermicularia. No corals or stromatopora seen but may be present. This by far the richest haul yet

Best block in bottom of dredge and was probably picked up in lagoon. Large Mn. slabs from outer slope?

Sept. 16th - Mon - fair, calm, mild

Put out midwater trawl and 6 free vehicles + camera

Duty 0800 - 1000

Good recovery fish in trawl; many shrimp + fish from set lines - incl ^{rat tail fish} ~~rat fish~~ over 51" long - largest of all known - prob. n. sp

Duty 1800 - 2000

Dredge 18

Rock dredge in lagoon area - fair recovery of rudistids and Mn. crusts

Put in Sigsby Trawl

Sept. 17th Tues - fair, warm, heavy swell

Sigsby trawl brought up large slab manganese 17

Dredge 19

Duty 0400-0600
- Put in rock dredge for
haul of ~~several~~ hours
across lagoon - going N
almost to atoll's rim.
Brought up 150 lbs ± of
- radiolites & Mn -
best preserved spec. yet
- detrital ls with
coral & (possibly) larger
forams, etc.

- cream-colored
(phosphatized?) ls with
shell that looks like a
Dentalium but flares at
larger end - possibly a
coral?

Dredge haul #19 may
prove to be richest in spp.

Continue search
for 1 free vehicle missed
yesterday.

Put in Midwater trawl ^{and Arceper}
Duty 1400-1600
continue toward
Midway

Sept. 18, Wed. - fair, mild, moderate
waves

Continue over deep water
Duty 0000-0200; 1000-1200
2000-2200

Sept. 19, Thurs - clear, mild, large swell

Duty 0600-0800 - continue
toward Midway - over occasional
low sea mount

Have decided to dredge on
one (or both) sea mounts to NW
of Midway - both resemble
Darwin Atoll & may have K. Large
mounts - like Midway & Kure
were probably well out of
water during K - their

volcanics being weathered and eroded - any fringe of R reef organisms now well buried by talus and/or Teri reef growth + reworked volcanics

Seamount lying farthest to NW has minimum depth of 880 fm. - may still be capped by R. (this seamount NNE of Kun - call it Palmer if dredging is productive? - one next to it Wentworth? - it has minimum depth of 995 fm.

Ladd ^{Bank} Seamount + one lying SW of Midway are much larger + shallower - any deep rock covered deeply?

Put in midwater Trawl - good returns

Duty 1600 - 1800

Sept. 20 - Fri - clear mild, calm

Duty 0200 - 0400 continue toward Midway

Duty 1200 - 1400 To Novo Bank - large bank SW of Midway - made two CDR traverses - on lee (south) side a distinct break at ~~600~~ ^{200 ±} 650 fm. Top fairly flat with least depth of 34 fm

Put out rock dredge over windward edge at 60 ~~to~~ up to 40 fms. Came in $\frac{3}{4}$ full (4 tubs + large box!) - mostly living lithothamnium in subspherical nodules up to 6" ± - some purple or half purple - some living starfish (5" ±) + large echinoid 4-5" - nodules bored by 2 spp

only slight trace 10h windward side

Dredge # 20

smaller sp. - crenellid

of lithophage-type clams.
- smaller of 2 very abundant
- also abundant on ~~slabs~~
irregular slabs a minute
spondylid - few dead shells
of a larger species. One
mitrid alive, also one
columbellid. Some slabs
with ~~corals~~ spondylid
preserved in alcohol. Many
of small algal nodules
with ~~fine~~ stubby
branches, and deep red in
color. Some green filmy
algae but no Halimeda
seen; few corals

Saved 3 burlap sacks
of nodules + 1 bag of
flat slabs. [Need to send
1 bag of nodules + 1/2 of
flat slabs]

We dredge total distance

of 2 miles - an algal nodule
bank, - richest assemblage
of large nodules I have ever
seen.

Put in ^{rock} dredge on lee
slope at 200 fathoms and
dredge up to ~~80~~ 90+ fm

Good recovery - 25 lb. ±
of dead spondylids + rare
living immature shells, +
few solitary corals and
pieces of colonial corals -
+ pectinids + arcas (Barbatia)
(Allen taking living forms
of pectinids - 3 arcas +
2 spondylid).

Few algal nodules - all
appear dead.

Large slab Amphistegina
ls (to Todd)

Bulk of above
haul to be sent to H.
Allen would be interested

Dredge #21

in preparing living
pelagic mat. for joint
paper with H. or Rehder
Allison to send sed.
samples of Dredge 20 + 21
- wants part of each returned
to him - after picking out
moll. + brachiopods

Made 4 arcet runs across
New Bank

(Duty ~~2000~~ - 2200 + 2400)
Night lights + dip nets
on New Bank

Sept. 21 - Sat. - fair, calm, warm

Put out midwater trawl
and arcet, progressing
slowly toward Midway
Av. 1000 - Allen + Allison
leave for home

Duty 0815-1000

Over Midway lee slope - an
irregularity at 110 fath.
"terraces" at 40 ± f. (= our
200 ± uncon?)
- main break in slope at 110 fath.

Proceed to 2 seamounts
to NW of Midway - on lower
tops at 880 f. other at 995 f.

West to Kure for rock dredge
haul at shallow depth outside
reef.

Dredge 22

Made dredge (rock) at
10 fm. I. Dead coral, some
pieces 1 ft + with wood + some
live encrusting lithothamnium; boring
moll, Murex, several spp. Cypraea,
small pectens + many crabs,
ophiuroids, etc. - a richer dish than
any Midway lagoon dredge spe.

Dredge #23

Similar to last - some large blocks broken + saved. - few algal nodules. one large Terebra, etc.

Head NNE toward two seamounts lying NW of Midway. Duty with Ron McConnaughey 1800 - 2000

Dredge #24

Sept. 22, Sun - pty cloudy, calm, mild

After ^{duty 0400-0600} running over seamount farthest NW of Midway ^{(Palmer Seamount) ~~unmarked~~} put in rock dredge - 1400 m. wire in 8:55 + fm Dredged over rough surface, finally hanging up.

Brought up half a tub of Mn nodules and vol rock - appears to be a tuft. Several large chunks of 1' ± - thick Mn crusts with cream-colored films and irregular fillings that appear to be organic but probably arn't; - phosphatized limestone². Appear to be films in Mn crust and between tuft and Mn crust and in cracks in tuft itself. Fillings appear to contain pelagic forams (an occurrence similar to the isp. Fucine on Sylvania guyot?)

Some of rounded smaller lumps resemble pebbles but all probably are Mn nodules

No chert, ^{or flint,} no pieces pure ls; no mega fossils - no K. light colored fillings may be terrary

Put in Midwater trawl - in deep water south of seamount

[The ^{two} seamounts to the NW of Midway and the two to the SE all have the narrow summits of seamounts yet all rise to approx the same level - 880, 995, 992, - and this is approx the depths of the Mid-Pac Mts. One or more of them could be topped by K. Is and/or flint. The first one tested showed only vol + Mn. the higher one (995) to SE could be different]

good recovery from Midwater trawl. Sea Kicks up - from south Duty # 1400-1600

28° 34' N
177° 50' W

Wentworth " Seamount
To " ~~Palmer~~ ~~Seamount~~ SE
of ~~Palmer~~ Seamount - after crossing from south start

Dredge

25 rock dredge on windward side at 965 fath (high point on chart - 995 fath). Let out 2724 meters of wire and bring up loaded dredge. Final hang-up due to heavy block (3'±) jammed into mouth of dredge. Rock types include volcanics (tuff and lava), phosphatized, ^{conglomeratic} limestone - both well coated with Mn. on at least one side. Est. wt - 1000 lbs

Sample 980-985 fms

Cream-colored phosphatized conglomerate contains rounded pebbles up to 3" in diameter and two types of small shark teeth, one triangular - a small "carcariid" (2 spec.), the other long and narrow - most unusual type (2 spec). No other megafossils though some of pitted areas look like coral material

Translucent pebble-like masses resemble chert but are too soft. Think this material (like that of Dredge 24 on Palmer Seamount) is Tertiary - probably Eocene but possibly Miocene

- Dick Rosenblatt will try to identify the shark teeth

given spec. 9/23/65

- Note glob. sed. in cracks in mn. nodule grooves - this maybe Recent - is not consolidated

Put in IKMT (Issac Ridd Midwater Trawl) and 5 free vehicles

Sept. 23. Mon - ptly, cloudy, calm on east

Capt. sent message to Midway re a reef run

across lagoon

- Fair return on IKMT

set out to recover free vehicles
Duty 1000-1200

Recovered all 5 free vehicles

- Packed rocks, etc.

- Put out IKMT

Duty 2000-2200

Sept. 24 - Tues - Fair, mild, calm

Dock at Midway 8⁰⁰ AM
(= 9⁰⁰ Midway time = Honolulu time)

Met by Capt. Iverson

(pilot) + Mrs. Jane Edwards + Lt. (jg) Marby ~~off~~ officer
(Lt. J. M. Henry is Pres)

Ashore for paper work at Administration + shopping, etc.

Rossiter + grand daughter come to ship for visit.

Evening at CPO club for lobster luau given by Coral Kings

Sept 25 - Wed - Midway

- clear, calm, mild
- checked in at airport
- H + Newman give talks
to High sch. students at assembly
& Principal John Ferris
Counselor Jane Hagnes
Sci. teacher Ivan Kessler
Lv Midway on 707 jet

2:15 ±

Ar Honolulu 5:15 PM

Out to Makiki Hts. to pick
up clothes, etc. Saw Wooley &
family

Lv. Honolulu on United

Flight #100 at 10:30 PM

Sept 26th Thursday

Ar. L.A. on time but
soaked in, after circling
diverted to Ontario

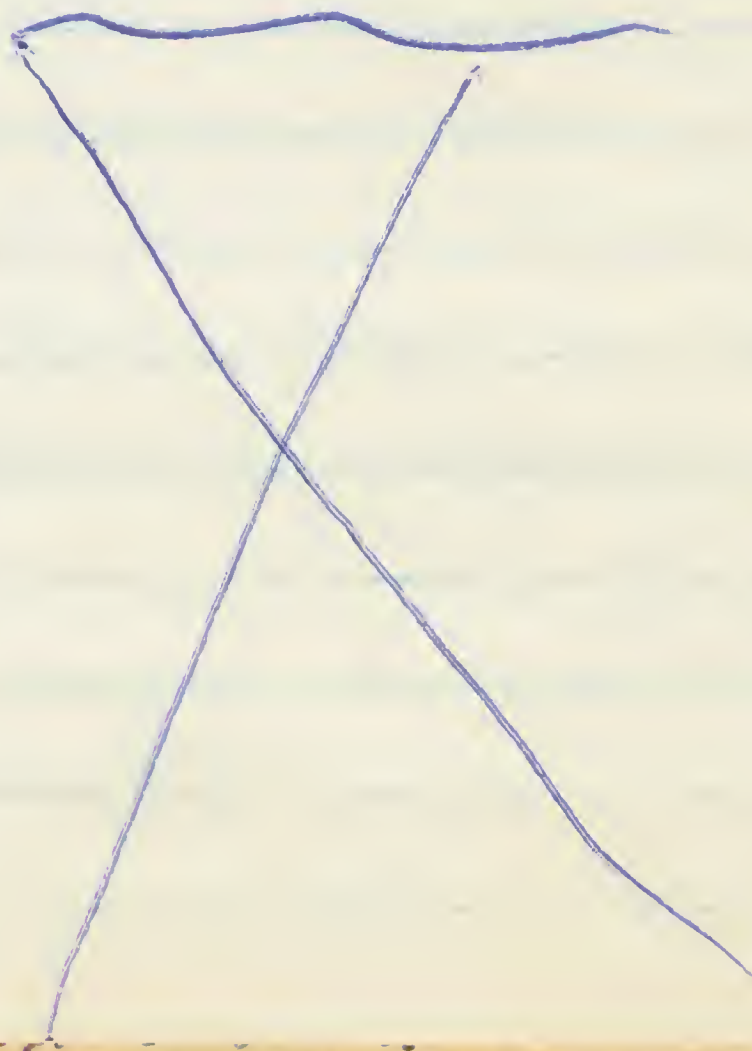
- back to L.A. by bus
but missed connection;

got seat on #64

- Lv. L.A. on DC8 - #10:45 AM

* [Tom Dana coll whole
colonies of Porites lobata
yesterday - claims cradle
filled with living hydroids -
at least edges have them
- algae below]

Ar. Friendship 6:30 PM ±



40⁰⁰ + 1,000 start

Mexico City ~ GSA, etc.
1968

Nov. 9th Saturday - cloudy, cool - DC

- clear, cool Mex City

Lv. with JA - Dulles - Eastern Air

#911; 12:45 P.M. - 1st class

Ar. Mexico City 4:30 ± C.S.T.

To El Presidente in attempt to
straighten out reservation mix up

To Aristos Hotel (Downtown Hotel)

- fine room on 10th floor with
window facing mountains to SW.

Across Paseo de la Reforma
to Maria Tschel (Hdgters Hotel),
thence to Del Prado; excellent
dinner in grill there (15⁰⁰ incl.
drinks and tip).

Nov 10th Sunday ^{Mexico City} - fair + mild

To Hedges Hotel to pick
up ident. badges, tickets, etc. +
meet various people - Coker, Wallace,
Grill, Dick Melhard, etc. With III Larsen

Took Xochimilco and Lagunilla
Market tour - bus to enormous
"threes market" (Lagunilla MKT)
and by punt to so-called
"Floating Gardens of Xochimilco"
- crowded punts, music of
several sorts, many of these
beating are Mexicans having
their Sunday holiday - food,
beer + soft drinks

Back at 4:50 - to Presidente
where after some strenuous
argument we finally
got a room!

Room at Artistas 24⁰⁰

" " Presidente 17⁵⁰

With III to Smoker
in Hedges hotel.

Nov 11th Monday ^{Mexico City} ptly cloudy, mild.

to Med. center for
papers on Senfloss spread,
Meso. Cul + Baja Cul (Allison)
+ Ocean Basins

Misc. conf. Hote. in PM +
to Editors' cocktail party
- Dinner with II + III at
Grill Rm, Prado

Nov 12, Tues ^{Mexico City} - fair + mild

Meetings - Ocean. III Cont. Mary
incl. H-Molter on Fla Keys
Mpt - Don White

Rhodes Fairbridge Fleischer

Bill Heroy, Sr Cloud

Geo. Sher Hess

Bob Ginsburg Benson

McHalvey Stenzel

Cillaly Stanley
Hembest Cooper, GA
Schopf (2 younger)
Snaveloy, Park

To Zoo in PM with A
& III to ^{son} Angel Inn for dinner
- long trip in heavy traffic
(45 min) but excellent food
and service at old hacienda

Nov. 13 - Wed, ^{Mexico City} clear and mild

- To pyramids of sun &
moon to NE of Mex City
- Lnd. at Sanborn's with
C.H. Behre + wife. Also met
Ralph Moberly. Unable to
contact Ned Allison at
María Isabel. Met Geo.
Wollard + son Bruce.

To Archaeological
Museum - marvelous place

- Dinner with III + II
at ~~the~~ Del Lago Restaurant

Nov. 14 - Thurs ^{Mexico City} - clear, cool

By car (with driver
Mario Bonilla G. to
Cuernavaca - lunch at
Las Mañanitas - delicious,
beautiful + very expensive.
On to Taxco to stay at
Rancho Taxco - shopping
in late afternoon

Nov. 15 - Friday ^{Taxco} fair, mild

shopping in Taxco in AM
Lv by car 11:50 AM - to
Mexico City, arriving at
Airport 3:30 PM.

- Lv Mex City (Mex de Aviacion)

#601 at 6⁰⁰_{PM} + 50 min

- Ar. Mérida 7³⁰ (\$10 ±)

To Del Parque Hotel (a dump) 28

as Hotel Mérida had
rented our reserved room to
Red Cross conventioners
Poor dinner at H. Mérida

Nov. 16 - Sat. - Mérida - clear, mild

Drove east 75 mi to Chichén
Itzá in AM (2 hrs), put up at
Mayaland Hotel - beautiful, comfortable
with fine gardens. Food (Amer.
plan) not too good.

Afternoon examining Maya
ruins. Those restored have been
fretted to 70% treatment, stones
from 1^{or more} sides being cannibalized
to fill gaps in others - work
well done - results most
impressive and really fascinating.

Clearing of jungle a task
to start with and there is
constant maintenance.

In dredging deep
ceremonial well (an enormous
sink hole) the first two exploring
exped. - Carnegie + Nat Geog
used suction pumps - latest
work (govt operation) used floating
raft + scuba divers - most
successful - less breakage of
pottery + bones.

Nov. ~~16~~ 17 - Sun - Chichén Itzá

fair, mild
Returned to Mérida to
check in at Hotel Mérida,
then SW through Uxmal
and south to Uxmal
and Kabah. Stopped at
(Hotel) Hacienda Uxmal for
delicious (and expensive)
dinner.

Ruins at Kabah only
partly restored - much work

still to be done
On to Uxmal ^{to see Hacienda} famous "Covvaac's House",
"throne", ball court, and
many other buildings. Are
actively restoring outer walls
of largest temple (using ~~the~~
stones and mortar - as Mayans
didn't do)

Return to Mérida Hotel
for night.

Nov 18th Monday - Mérida

partly cloudy, mild.
Lv. Mérida, via Pan-Am 10¹⁵ AM
Ar. New Orleans 12:05 PM
-shopping in ~~the~~ old part of
town after lunch at Court of 2 sisters
(Brehanus' friends)
Lv. New Orleans on Eastern
Air. (#552) at 6:35 PM
Ar. Friendship 9:30. Thanks
to 120 mile tail wind.

Paleontological Convention
1969

Chicago, Ill. Sept 5-7

cloudy, mild A 72, 83
Sept. 4th Thursday H 122, 75 ^{stop}
Lv. Wash., DC United #553 ⁻¹⁰⁰
Nat. Airport 3⁰⁰ PM EDT
- with SA

Ar. Chicago Midway Airport 3⁴⁴ PM
#2013A CDT
To Conrad Hilton. Anniversary
dinner (35th) at Haymarket
Restaurant.

Sept. 5th Friday - rain that started
last night continues { lunch ~~few~~
+ Dunkle
meetings all day; smokers
etc. in evening (Dinner with
Whitmore & J. Wells) 30

Sept. 6th Saturday - clear, warm

2 Reef Symposia - gave paper on "Existing Reefs" at opening of afternoon session.

Cocktails (punch) + dinner at Field Museum + to hear Phil Abelson speak; drink after with J. Wells

Sept. 7 - Sunday - clear - mild

To AM symposium on general concepts, etc.

Lv. from O'Hare airport on United 760 @ 4 PM CDT

Ar. Nat Airport. DC. 6:45 PM ± EDT

Costs (excl. of p.d. 2) 11.19

La Jolla 134.50 st.

Oct. 8th, 1969 - Wednesday - cool, light rain

Lv. Dulles United 59 10⁰⁰ PM
1/2 hr delay + starting

Ar. L.A. 3 25⁰⁰ PM but made connection

Lv. L.A. United 109 at 3 40⁰⁰ AM

Ar. San Diego 4 20⁰⁰ PM

By taxi to La Valencia

- 6⁰⁰ + tip

(Rm. rate - 8⁰⁰ Scripps rate)

Evening with Bill &

Ruth Newman

Oct. 9th Thursday - La Jolla

Fair - mild with Newman to Scripps -

- called Engel - out of town

Meeting on Acanthaster
all day - cocktails
at Newman's - dinner
at German restaurant
with Cooreau, Eckles, Newell,
Chave, Mexican

Oct. 10th Friday - La Jolla
- clear, mild

Finished conference
about 3 pm; visits with
Fran Parker, Bramlette,
Bill Riedel + Shepard -
later with Newman re
barnacles (Ewa → Trinidad
→ Viti)

Taken by Newman's
- with Norman Newell - to
Joe Curry's home for
dinner. Shors also
invited but Mrs could
not come on acct. flw. Very
pleasant evening but
had to leave at 8:30

Lv. San Diego United #302
at 9:45 PM

Ar. L.A. 10:19 PM

Lv. L.A. 10:50 PM

Oct. 11th Saturday - en route DC

Ar. Wash 6:00 PM

(Friendship)

Philadelphia - 1970

Tues. Nov. 3, 1970 - mild, rain

Lv. Chevy Chase 10:20 AM

with A. 18553

Ar. Phila 3³⁰ PM ± 18696

= 14³/₈ mi.

checked in at Academy
with Robert Robertson
and met his associate
George Davis (land + fr.
water mall)

To Sheraton - Rm. 1649

@ 24⁵⁰

Joined by Nick for dinner
at Hotel - watched election
returns in evening.

Wed. Nov. 4th - cool, heavy rain PM

At Academy Nat. Sci
all day. A shopping, etc / 33

Phil. Acad

Robertson, Robert, Dr
Davis, Geo, Dr
Maes, Mrs. Virginia (nee Orr)
Jones, Barbara (secy)
Graff, Walter (volunteer)
Rulon, Nancy (")
Lears, Hal. (" , artist)

Okutana, Dr (visitor from
Scripps)

Thurs. Nov 5th - cloudy, cool, clearing

At Acad. Nat Sci. until
mid-afternoon. Jane on
Museum & house tour

By train to Bryn Mawr
for dinner with NBL
and Steve & Nancy - at
Inn of Four Falls - much
atmosphere and excellent
food and service

Fri. Nov. 6th - cool, clear

Lv Phila 9:50 AM - 18701

Arr Ch. Chase 2:45 PM 18846

= 147 mi

Dr. Robert Robertson

Dr. George Darwin (in far East)

Mrs. Virginia (Orr) Maes - pt. time

Earl Shapiro - Acting Cor., Geol.

Gail Specht

Kathy Carpenter

- Faix

} volunteers?

Jones, Barbara ?

Alison Kay - visitor

H - 150 - Amer Exp

A - 150 - " "

H - cash - 82.75

A - cash - 28.44

NBL 103-1000
x 665

Philadelphia 1973

Wed. Apr. 11th - cool, clearing

* 24815 10.9 5⁰⁰

checked all

Lv. Ch. Ch. 10 ²⁰ AM

{ 24962 8.7 3²⁰

checked oil + battery

Ar. Phil. 1:35 P.M.

24975 = 160 miles

To Acad. Nat. Sci. to drop

Mrs. etc. Robertson away -

met Mrs. Maes, Miss

Gail Specht and _____;

also Alison Kay here on

visit.

To Holiday Inn where

we checked in to double

room - with twin doubles

35

@ 29⁰⁰ + tax.. Returned
to Acad to work until
5⁰⁰

Nick came for visit
@ 5:30 ; excellent
dinner in Inn's Tapestry
Room.

Thurs. Apr. 12th - clear, cool
Academy all day; Jane
at famous antique show.
Dinner at Inn's Coffee
Shop - sea food here better
(and cheaper) than in Wash

Fri Apr. 13th - fair + quite cool
Academy, finishing at
3 PM. Dinner at Inn -
reading + to bed

Sat. April 14th - Fair, cool
Morning in Independence
Nat. Historic Park - thru

Indop. + Cong Hall and all
other historic buildings - all
carefully restored. Entire area
being returned to its former state.

Lunch at Lafayette Restaurant
and drove to Germantown where
we examined the Deshler-Morris
House and the Clivden
House

Sun April 15th - Fair, mild

Picked up grand children
and drove west to Remington
Antiques - inside and outside
- largest assemblage of dealers
in USA. To another antique
area nearby and back to
Roberts. Rd to hunt

Easter eggs (this ceremony held on Palm Sunday as Nancy is to visit Cape Cod over Easter week-end).

Onto to Gene Margiotti's San Francisco Restaurant for good dinner - store + rest of us met the famous football star who runs place (also, a "Gano" hot dog chain) - ex Baltimore Colt - a nice guy.

Mon. April 16th - Fair, mild
Lv. Bryn Mawr 9⁴⁵_{AM} 25015
25086 5.7 3.20
checked oil + batt.
Ar. Ch. Ch. 11⁵⁵ 25107
= 136 mi
Total cost of trip
278 52

air fare 216.04
exp. — 230.65
446.69 - total cost

St. Louis ~ 1973
(to attend Marg. M's funeral)

Wednesday May 23 ~ rainy

Lv. Wash. D.C. Nat. Airpt. on
TWA #419 at noon
Ar. St. Louis, Lambert Field,
12:45 C.T.

Met by Mike and Louis
Miseroocchi - to Quality Inn
SW. located on U.S. 66 and
Lindbergh Blvd. in St. Louis
County - suite at spl. rate
\$21.84.

He picked up by Paul
+ Dorothy for afternoon
visit at 2105 S. Warson. At
5PM to Wupertis to join Jane
and others.

Returned to our inn for dinner
at Viking's Restaurant (excellent
sea food). To Lupton's until
10⁰⁰ to meet callers - large no
To Margaret's house with all
the Misrocchis until past
midnight

Thursday, May 24th - St. Louis - cool &
clear

Jane's Birthday

To Lupton's for funeral at 1⁰⁰_{PM}
- on to Valhalla. - services at
both places conducted by Scottish
minister of First Presbyterian
- very fine.

Remainder of afternoon &
evening at Margaret's house.
Talked with Woodson who
arrived in Smirnovff sailplane
race. Called Gordon & Peg. 70

Friday May 25th - St. Louis - clear, cool.
Lv. on TWA #482 at 10¹⁰ AM
(driven to airport by Carol and
Randy).

Ar. Nat. Airport, DC
12:50 ± PM - still
raining in DC!

Personnel - R/V Agassiz

- ✓ Capt. ✓ ~~Bottom~~ Benham
- ✓ First Mate William Clappitt
- 2nd " Richard Ship
- ✓ 3rd Mate Ron ~~Quigg~~ Quigg
- Chief Eng. C.E. Smelser
- ✓ Newman, Wm. A
- ✓ Rosenblatt, Richard H.
- ✓ Allen, John A.
- ✓ Allison, Edwin C. (Ned)
- ✓ Johnson, Robert
- ✓ Cukr, Tom Sockr
- ✓ Thomas, Baron E
- ✓ McComm^{aghney} ~~on~~ Ron
- ~~Dana, Tom~~
Limas
- ✓ Dana, T.S. - corals
- ✓ Barnett, M - Fish
- ✓ McCosker, John
- ✓ ~~Liebertz, P.J. - Res.~~
- ✓ Orris, Dr. Mar. Tech / 58

Total sea party 12

" on board 30±

✓ Alex Asst-Cook
✓ Curry ~~Robert~~ Hds cook
✓ Sig (mond) radio shack
- electronics

Pearl and Hermes Reef

- C14 samples - 6? @ 2 hr. (=1-2 fists)
- coral spls from old groin for
cf. with spls emerged reef -
large pieces
- Sediments - top of beach ^{cracked}
- Porites lobata present ^{as at Midway?}
- collect
- blue coral is Montipora sp
(cf. M. tuberculosa Lam.)

En route

~~review H talks~~

~~review Mem 61 & Mid Pac itineraries~~

~~Resig rept.~~

~~emo rept. Sept.~~

Honolulu

- ~~- Post card Todd + Lew 8/21~~
- ~~- 8/21 mo rept/ to E-502 sent 8/20~~
- ~~1) - return/vol. pts. to DMJ~~
- ~~- tube charts to ship~~
- ~~2) - news of Lonnax?~~
- ~~* - see next page~~
- ~~* - phone & visit Eugene Kvidler (corr)~~
- ~~- call Bill Craddock?~~
- ~~- Alon. Thomas - cores to be moved~~
- ~~fr Keelii facility to~~
- ~~Pier 18?~~
- ~~4) { CKW. visit? Hilo? - nursing home~~
- ~~Howard Powers Aug 9, 1947 # 11~~
- ~~with Director [ask re ckw]~~
- ~~5) - Dr. Moffat ^{Mon} 8/16? buy 2 sp. shirts~~
- ~~- write A re anniv. 9/3-4~~
- ~~- Newman re military war - to~~
- ~~land + pass. return by air~~
- ~~- Newman re lit. - buy 3? (61~~

Midway ~~Pearl & Hermes~~

- examine "cracked Pontes" - collect? (part)
- ~~City spls (part) 2 lbs (1-2 fists) (part)~~
- ~~sediments + Pontes lobata? (p-H)~~

UNIV

~~Geo. Woodard - retiring?~~

~~Gr. Macdonald~~

~~Ted Murphy?~~

~~Adm. Thomas - check cond. Mid cores~~

~~Ralph Moberly { Malahoff, Alex
sand paper } Manghnani, Morti~~

* ~~Resig, Johannan - re pub. plans
not MS~~

~~Kry, Alison - re prog. on mail rept~~

* Bishop

~~Selden Washington, Roger
Bygar - info on Pearl & Hermes
discuss type~~

On return

- ~~- call Bill Benson - lunch~~
- ~~- check on best binding USGS~~
- ~~- crust, etc. from Vitalea to Bryan ^{case, Dr. 5}~~
- ~~- check on Max City resow. - Ed Eckel
promised to make 8/12~~
- ~~* - abstr. to chu - before 10/15~~
- ~~- check Tracy PP 260 "JJ"~~
- ~~- rept. to Kridler if P.H. is visited - before 10/31~~
- ~~- see unplaced gast. in tray on draft. table~~
- ~~- Tongan forward - celest Todd forward~~
- ~~- call Ted Chamberlain 657-4222~~
- ~~- 2 trays line Id. ~~from~~ ^{roll} from Rehder~~
- ~~{ - enter check 22⁰⁰ DV Harold F. Moffat~~
- ~~{ - UTC - 8/19~~
- ~~{ - send 260-BB to: Bruce Miller ^{Coconut Id}~~
- ~~{ HZMB, Coconut Grove, Hanalei~~
- ~~{ Hawaii 96744 ^(over)~~
- ~~- send J.W. Bir Cores to Allison, E~~

~~- send PR 531 to ^{BLIND} G.T. Vermey
Dept. Biol., Yale Univ~~

vermeij

~~- see Cross letter rec. 8/22 - send
100 gms. Rec. Midway shells to him
for Moore~~

~~- order Pelican Fountain Pen Ink
for OO pen~~

~~- write DM's re party, lei, etc. 1/5 also
Birthday - Woody flight -~~

~~- check Futuna ref. - meet Ned Mex
city for foss (moll. fr tuftaceous
beds, some ls. - larger forams, etc.)
check occurrences Viti moll. in
Marshalls~~

~~- Joe Hazel - no commit. yet on~~

~~ostracodes - Allison thinks well of his
work~~

~~- see Newman - H. responsible
for all gast. of trip - both fossil & Rec.
- will be sep. at scripps and sent -
bring in Schl an/or Rehdor if desired~~

~~- "Pyrg" finished by Dec 7 - then~~

~~send all Pyrg (foss + Rec) to Newman
[with mat to USNM, save paratypes
& dupl. to Scripps] (see next page)~~

Ship board + Hon. return

~~- review H. SIT - 260 "JJ" ✓✓~~

~~- review "Pyrgonia" - Trinidad~~

~~- ask Allison re Bryozoa Hawaii corr.
- mailed 8/23~~

~~- Mid-Pac ostracodes - Allison wants
for Holden? - (he now at Berkeley
doing PhD thesis on Rec. Pac. ostracodes
- Micronesia, etc.) - Joe Hazel now
working on Jamaica K. ostracodes
- would work up any well preserved
K. of Pac. if not planned for others.~~

Allison thinks well
of Hazels work has
made no commit.

~~- ch. abst. - pt. ✓✓✓✓~~

~~- send Moore Rept Sept.?~~

~~- cable } Laura Yokogawa re arrival?
call (No Laura Wed. or Sun)~~

~~- call Bill Craydick - dinner?~~

On return - cont.

~~* - check id. of Rec. trochid~~

~~- H. to get all Rec. gast (+ any
Tertiary; Nerinea from k to
Allison; samples in Dec 3~~

~~* Sept. MO. Rept~~

~~* Palmer seamount material to Todd~~

~~Reprints to John Allen~~

~~Midway separate to~~

~~John McCosker~~

~~Dept. of Marine Biol, Scripps~~

~~Tom Dana~~

~~280-K Grad. Dept., Scripps~~

~~280-K Saipan ecd. (clod)~~

~~280-P Biki + Ek fossil corals (with)~~

~~403-B Guam? etc~~

~~- send Sig's sand dollar to Allison~~

~~- note to Tom Gray?~~

~~- send Rossiter piece basalt in plastic~~

Addresses

Powers, Howard - Hawaiian Vol. Observ.
Hawaii Nat. Park
Hawaii 96720

Cox, Doak

Kay, E. Alison - Zool., Univ. Hawaii

Macdonald, Gordon

Woolhard, Geo. - H.I.G.

Thomas, Charles - "

Resig, Johanna - "

Bryan, Edwin, Bishop Mus.

Moberly, Ralph M. - H.I.G.

Lennox, Colin - RR 5th, Waiakoa, Maui
96790

Larson, 4405 E-W High. Beth. 20014

Stearns - answering ser. - Mrs. KOND 675-755

Kridler, Eugene, Administrator, Bur. Sports Fisheries
and Wildlife, P.O. Box 698, Kailua, Hawaii
(337 Uluniu St.) 96734

R/V Alexander Agassiz, Castle + Cook, Inc.
Ship Agency Division, P.O. Box 2990
Honolulu, Hawaii 26802

Yokogawa, Laura, 2535 Makiki Hts. Dr.

Wontworth, C.K.

Apt. #1 Halekolanani Apts

262 Kapiolani, Hilo

Mabry, Lt. officer of Royal Kings

Klub, Midway

Hemry, Lt. ^{J.M.} - Pres. K.K.K.

~~Ship~~

~~Quake, 3rd Mate~~

Correspondence

JA - 8/17 Kamuela, Hawaii 8/21 - Honolulu

8/18 " " 8/23 - "

8/19 Honolulu

Paine " " "

Todd-Low - Honolulu 8/21

Grant Gross 8/23 - Honolulu

Dorothy + Paul Johnson 8/23

Shipments

~~1 carton field equipment~~ rec. 10/8/68 } Midcoy
~~1 roll charts~~ rec. 9/30/68 } 9/24

Misc

Moll. - boil in fr. or salt water for
5 min. (start in warm water - bring
slowly to boil and cool gradually)
- any smaller than $\frac{1}{3}$ " soak in
70% alcohol + dry thoroughly in
sun (iso-propyl may be used - at
50% strength)

Land snails - drown in fr. water overnight
(12-24 hrs) - drain - place directly
in 70% alcohol

R/V Alexander Agassiz - 180'; 825 tons

Exp. & Travel checks

- start 131 ⁴⁵ + 1000 travel checks
- max. flight insurance 8⁵⁰
- taxi to Friendship 3⁵⁰ + ⁵⁰

~~~~~  
Mexican Trip

|                     |                        |
|---------------------|------------------------|
| Car dep. Mex City   | 80 <sup>00</sup>       |
| Rebate after 2 days | <u>30<sup>00</sup></u> |
| car cost            | 50 <sup>00</sup>       |
| driver 2 days       | 30 <sup>00</sup>       |
| " exp. + gas        | <u>14<sup>00</sup></u> |
|                     | 94 <sup>00</sup>       |

(driver @ 12<sup>00</sup> p/d but 15<sup>00</sup> on road!)

Phone numbers

Univ. Hawaii 808 - 918-111

Macdonald (home) 255-893  
Gordon + Ruth

Cox, Doak (home) 997-893

Kridler, Eugene 262-5466

(Bur. Sports Fisheries + Wildlife  
337 Uluniu St., Kailua)

Wentworth, C.K. - Hilo - 52609

other pt. island 9-52609

Powers, Howard 678-485

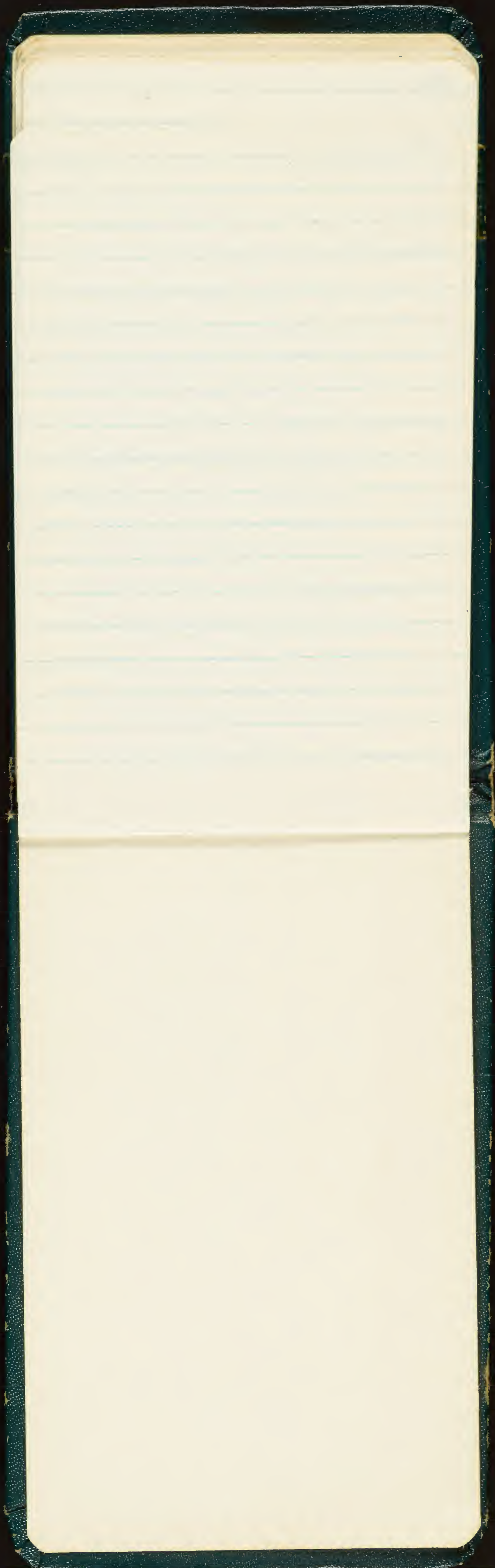
Lennox, Mr + Mrs Colin - Maui 784-871

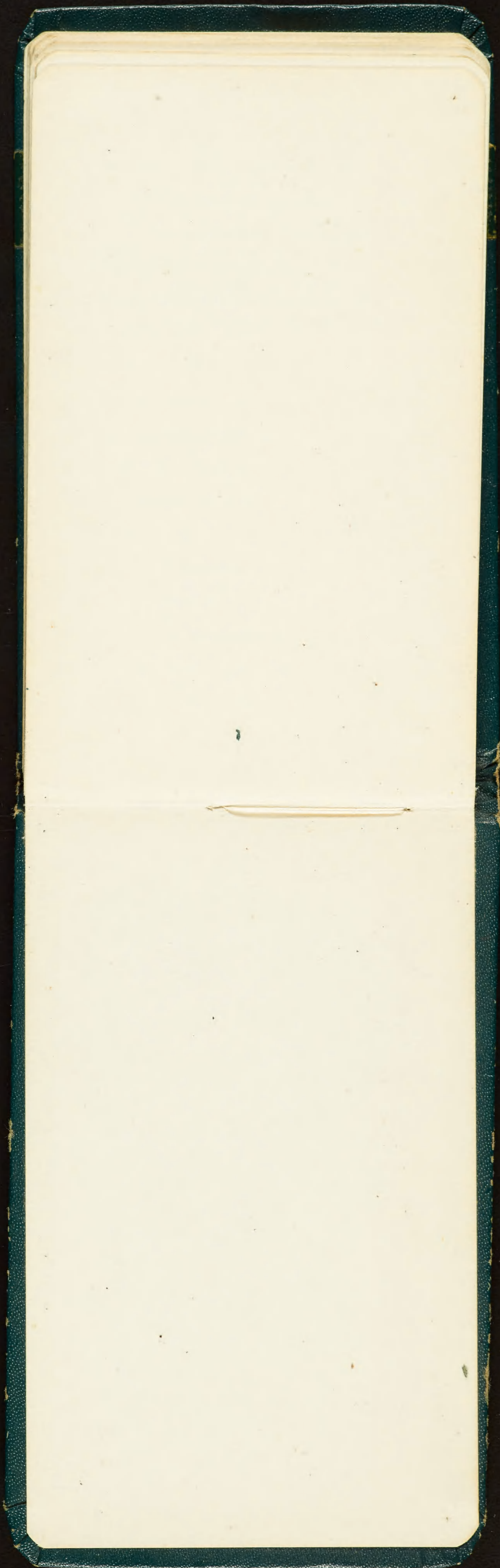
Macdonald, Gordon - 261-5893

Craddock, Wm - home ~~261-249~~  
Louise

Gray, Thomas, Honolulu 569-326







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