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Maps Aust.

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Hawinertey Range

1:1,000,000

Broome
Horse
Ketchikan
Oakes
Rice
Wilmington

Home address:

Dr. Howard A. Powers. *
P.O. Box 21
Hawaii National Park
Hawaii 96718

* Scientist in Charge
Volcano Observatory.

Maps Aust.

1.
1.90

Hammer Day Range

1:1,000,000

Blowers
Hammer Day Range
Hammer Day Range

Record of Trips to Australia
The East Indies and Transpacific
Points May 16 - June 30 1968

see page 19

Index

Notes & Travel log - p 18

Field notes on collections
p 200

Addresses: Sydney

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Esso - Sydney
 Abe Phillips

T. Western Australian Gov't. Tourist Bureau

Down town Sydney, get the

Western Aust. Tour Guide +

Speedo Rd. Chart

American Express

84 King St. Sydney

Addresses (cont.)

3

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13

Miscellaneous

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his collection of 12/63 from
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Siller C. W.
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"Aussie Stone at Home"
oil & Gas Jour.

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Panrapanusa, Dr. Felix

The International Rice Research Institute

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Handwritten notes and diagrams on the left margin, including vertical lines and small symbols.

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1963

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from the Prec rocks in
Australia."

J. Geol. Soc. Aust.

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Map of main sites and features

Richards, J.R., H. Berry, + J.M. Kinoshita

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Ages of Some Australian Zircon's"

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Ravers Thorpe Kieran, W. Aust,
ages (corrected) 2800 M - 2900 M

Leggo, P. J., W. Campson + Mr
 Thomsen " Radioactive base
 Some Tree rocks from
 N.W. 1/4 S. of 10 Twp. 10
T. 10 S. R. 10 W. 12:53-65 10

May 16 Arose about 5:30 AM after about
 Acapulco, 5 hours sleep. Dee drove to airport
 Mexico Arrived about 7:30 + checked in with
 case to Acapulco. Weather clear and
 quite warm in Boston area. Clouded
 over shortly after leaving. Quite choppy about
 half way to Chicago, heavy overcast there (There
 were tornadoes yesterday afternoon in Chicago
 area + to S. + west). Arrived behind schedule and
 left behind schedule. Weather excellent clear to
 Mexico City, where arrived at 2:30 local time
 = 4:30 ~~E~~ Eastern Daylight). Same plane on to
 Acapulco - only 25 minutes flying time from
 Mexico City. Very interesting geology, terrain and
 extraordinary cloud development over the
 mountains. Arrived Acapulco about 3:30. No
Baggage. What now? The same plane that
 left Boston arrived here - no change of planes.
 And I saw the bag on the luggage belt going
 past the ticket counter in Boston. !

Cab to Villa Vera (12 pesos). This is
 a beautiful spot + excellent room - much too
 big. Has refrigerator, + area large enough for
 a cocktail party. Went into centro (about 4
 miles or more) and bought a shirt, socks +
 handkerchiefs (163.50 pesos) The city of

Acapulco is strong out along an extraordinary deep embayment of the Pacific coast. This is a humid, but not excessive by tropical climate. Vegetation is semi-desert and land usage very limited owing both to aridity and slope. Along the coastal lowland to south & east of the hills of Acapulco are miles of copra plantations - reminds one of Ceylon - but trees are quite young and many new plantations evident. Around Acapulco back from the coast reminiscent of southern California in vegetation & topography but much more tropical when & where irrigated. The downtown area of the city looks just like the typical Latin American city where Spanish culture set the pattern over 400 years ago.

May 17 - Hotel Villa Vera, Acapulco.

No baggage yet. This is a nightmare situation. Shall I go back to Boston or go on? Have little interest in sightseeing here in view of situation.

~~May 18~~ Boralinda
 May 18 Left Vella Vera at 10 tonight
 for airport. Baggage finally arrived
 about 5 AM - was located in Atlanta
 Georgia! Mr Lopez reimbursed me
 304 pesos for clothing.

Quantas flight for Papeete left
 shortly after midnight - 7 hours & 30
 minutes flying time to Tahiti - Arrived
 Papeete at 4:30 AM local time -
 no flight to Bora Bora until 2:30
 PM the 19th - Went to Matawai Hotel
 + to bed. No gassing of baggage!

6 PM - Bora Bora 5/19/68

May 19 Awoke this AM about 10:30. The
 Matawai looks exactly the same. Had
 breakfast (omelette - 180 F!) Talked with
 a fellow guest from Australia. Plane to
 Bora Bora at 2:30. Landed one stop
 enroute - 140 miles to Bora Bora. There
 were 6 Americans all bound to the Hotel
 Bora Bora. I decided to go back on the
 launch ^{to} the Noa Noa. The Polynesian girl
 Joewina who was in charge of passengers on the
 launch took me on her motor scooter to
 the Noa Noa. When arrived the place all

2) The Hotel Bero Bero is "owned" by Americans - San Francisco capital

closed up, but assistant manager found a key & put me in room # 24. The cook disappeared and there are no lights. I am writing this by candlelight at 7 PM - There is absolutely no one around and it is absolutely black outdoors - mild drizzle. No food, no light & no one around. Probably best to go to bed. Am very hungry. Asst manager said dinner would be between 7:30 & 9, but the kitchen & dining room across the road are both locked and completely dark. When my candle burns out I will be complete blackness. What to do? Have never been in such a situation.

later 10:30 PM

At 7:45 decided to do something about this situation. By using the Mexican wax matches I was able to get out to the road (The candle I was left was about $\frac{2}{3}$ gone & no other on hand) and walked to front of a thatched hut & called for help - in French presently 2 Polyneesian women came out of the house and gave me matches and offered me pan (bread). They seemed quite con-

arrived about the situation and told me
 the hotel was fermé - Dimanche. At
 about 10 minutes to 8 a motor scooter
 came into sight coming from the north. I
 waved & it stopped about 100 feet or more
 down the road. The driver was a young well
 built Polynesian who spoke no English. Was able
 to communicate my problem and he turned
 around & drove clear up to my room door.
 Meanwhile the woman who had offered me the
 bread came up & helped me get my bags out
 & loaded on the scooter. I sat behind holding
 on to Antonio's shoulders. We stopped at a
 small "Perron", but I figured I would never
 be able to get out tomorrow on time for the
 return flight to Papeete - so asked Antonio
 if he could take me to the Hotel Bora Bora
 - seven kilometers south. He did - a
 strange ride along the sand road through
 endless coco nut plantations. Arrived at the
 Hotel Bora Bora at 8:10 - Finis & a
 weird adventure.

This is a beautiful Jet Set place - \$35⁰⁰
 per day (includes meals but not drinks)
 Cloudy but no rain. Am almost on the
 beach & can hear the waves softly lapping

natural
break
{ I learned

This island has an incredible barrier reef - only one small break in it. The basalt plug which forms the central part is almost a geological model of a volcanic neck - the island is much larger than I had visualized from seeing aerial photographs. Vegetation seems quite depauperate, although on the coastal "plain" coconuts seem to grow well. The island is spectacular in any sense - more beautiful than Moorea although I think Tahiti is the most beautiful island in the world if one discounts the north coast of New Guinea, ^{or seen} from the Gulf of Huan.

There is a steady roar (almost sounds like a distant jet plane) of the sea breaking on the barrier reef. The frequency seems to be about each 12 seconds for the major swells breaking over the reef. The south east trade blows very steadily during the night here.

Matson line ship pulled into
Bora Bora lagoon this AM. Anchored
off Vaitape. Launches to shore 1 day for passengers

25

May 21 Hotel Matavai, Papeete
written at 2 P.M.

Breakfast at Bora Bora Hotel yesterday
about 10 AM. Spent most of the morning ex-
ploring the place + wading in lagoon +
paddling over the coral close to shore in
a curious plastic float which has a glass
bottom face hole to see down. Since I
left my wading shoes in Papeete was
somewhat limited in operations. The water
here is incredibly clear, but the life in
the lagoon seems less varied than in
Fiji except for fish. Around one coral
overhang counted 12 species of fish in
few minutes. The most interesting of the
fauna was an octopus which I hope I
got some good pictures of. After lunch went
down the road on foot toward Vaitape
Walked for 2 miles + saw nothing but
unmanage or mis managed coconut
groves. Many large piles of sprouting nuts.
The natives here just let them drop +
may or may not pick them up. A de-
pressing sight as is much of French
Polynesia. Later in afternoon yesterday
more time on the lagoon. It seems that

26) at beach party (barbecue) last night.
met a Mr Babb of Litan Industries, Woodland
Los Angeles - electronics + amateur astronomer

I was scheduled for 2 nights here and asked manager if I could stay over for another day and leave for Papeete on return plane. He failed to remind me that the plane left at 10 AM - so this morning I slept till 7:45 only to discover I had to pack up and leave on hotel bus at 8:30 - hence no breakfast. But I was charged for 2 full days minus the price of today's lunch - a total of \$77 for my brief stay in Bora Bora. Hardly worth it, although it is an incredibly beautiful island. Lunch got us to airstrip on Bora Bora on time and plane was on time at 10 AM. Came down at Raiatea ten minutes later. This island has one hotel - the Bali Hai - cost is \$15⁰⁰ including meals (single). From Raiatea one can take a launch across the lagoon (some lagoon between the two islands) to Tahaa, which is a large mountainous island. Was told one could stay there with a family (there are no hotels) for 300 - 400 francs per day! I wish I had known

XNB - number of people transiting
Papeete last year was 31,000

27

about this earlier because the Bora Bora is extravagantly expensive, although with excellent service, food + "atmosphere"

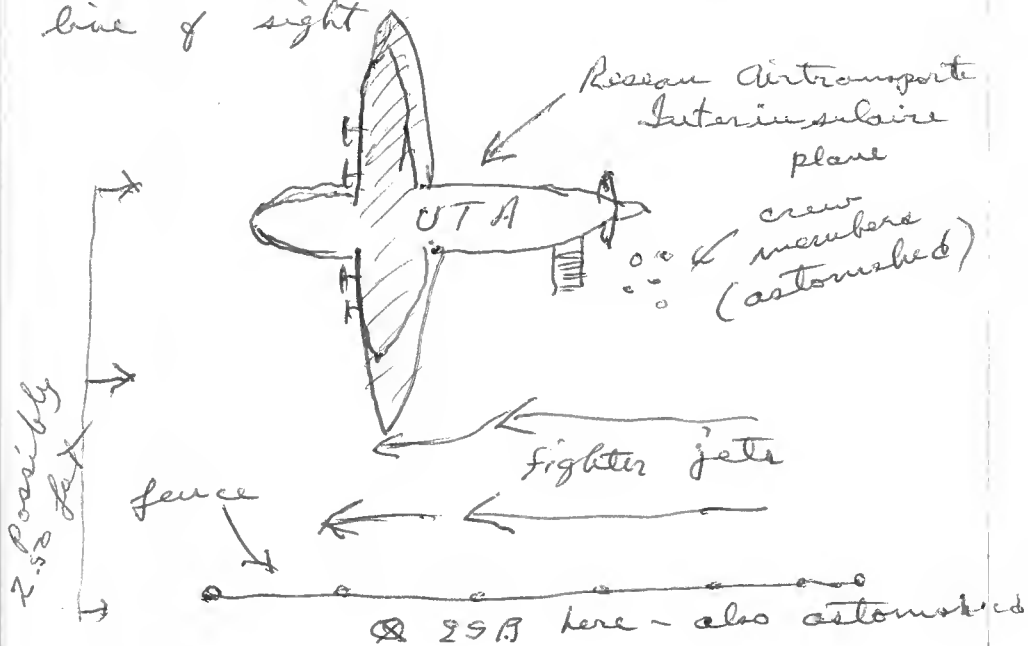
At the Bora Bora about 90-95% of all guests are from U.S. and of these I am told about 70% are from California.

The food here is of strange origin - the beef is from New Zealand, vegetables from cans + very little fruit. At the beach barbecue last night there was a whole calf cooked Polynesian style on huge spit made of wood - the animal trussed by each leg. I learned this AM that it was from Australia!

Beer at the Bora Bora is 40 Francs per bottle while at the Matavai, which is scarcely a luxury hotel it is 60 F! My lunch today at Matavai was 250 F plus 60 F more a bottle of local beer. This is an incredibly artificial economy, yet there are all these lush volcanic islands scattered across French Polynesia. This situation cannot last since the native population is mushrooming (27,000

in Pojeeste alone now).

But the atom testing goes on. at the airport ^{at Bora Bora} two supersonic fighter planes suddenly roared by between the UTA plane and me - I was at the fence alongside the field - They were going at probably Mach 1 or more and the tiny planes seemed like mosquitoes - I could hardly see them go past - at right angles to my line of sight



waiting room

They were just above ground. It must have been a stunt for some

An American company built a copra processing plant in Papeete - has been in operation now for 6 months / 29

reason - probably to impress the tourists - or else totally unauthorized.

At Peatea we had to wait for nearly half an hour (is normally a 10 minute stop) until a large flying boat came in from some undisclosed ~~point~~ point of departure to leave off a large crowd of men whom I learned were "atomic workers" was told this by one of the hotel boys from the Bali Hai who was waiting at airport for someone.

On arrival in Papeete went to Metavan where I will have to pay for another room since the Pan Am flight to Pago Pago does not leave until 10:30 tonight

I find I have too much baggage - with room to put anything extra in. Also find my ^{electric} razor will not run - it didn't in Mexico either. It never ran properly after it came back from the Schick store in Boston. Something wrong with the motor because the battery charger light goes on.

Later - 3:30 PM - walked up

The hill road from Matavan - traffic incredible - very dangerous walking because no provision for pedestrians - also no pedestrians - everyone but everyone rides in cars, trucks or scooters - the latter are much larger for most part than those I saw here 3 years ago. Children ride bicycles. Came down and turned right toward town - traffic even worse. Thought I could escape it some by going down to road along the harbor. This was absolutely incredible - at 4:30 it was impossible to cross the street without $\frac{3}{4}$ certainty of being hit. I waited 10 minutes and gave up to walk along on shore side (no sidewalks) for about a mile. About 5:15 I crossed and walked around in commercial district. Great changes here - whole blocks of new shops - something like Noumea. Finally found the city market. Much more going on than three years ago but walked around to observe prices. These are posted on large signs overhead. Here are

some Papeete city market official prices - all in Polynesian French Francs

Eggs (local (January to June)) 1.35 / doz

Vegetables + fruit

Taro	35 / kilo
pears	20 each
large grapefruit	40 each
oranges	70 / kilo
tomatoes	110 / kilo
carrots	50 / kilo
green beans	90 / kilo
cabbage (European type)	70 / kilo
cucumbers	60 / kilo
salad greens (escorolle)	95 / kilo

Meat - (Beef only listed) = Local Beef.

cotes entrecotes	200 / kilo
filet	240 / kilo
ragout	120 / kilo
doube d'epaule	200 / kilo
aloyau	240 / kilo
doube cuise	220 / kilo

[The local beef is tough as leather]
from what I have had of it.

Later 9:30 PM.

Decided not to pay for another exhorbitant meal so went down to the local magasin near the Matawai and bought a can of crab meat (Canadian) and a small tin of pork paté de foie gras - total ~~107~~ 107 francs. Crabmeat was 92 francs for a 7 oz. can; the paté was 15 francs for 2 ³/₄ oz. Not too bad fore when washed down with some Guadeloupe rum and Papeete branch water?

One more aspect of Papeete which is quite incredible - While the sun was going down over toward Moorea late this afternoon and while I was looking at the small craft (mostly from Los Angeles) moored at the "small yacht" basin, I noticed that the large valley just south east of Papeete city was full of smog! Later I noticed it was worse. Apparently a full scale smog problem is developing here under certain weather conditions as today. The South east Trade winds are cut off by the higher mountains and the smog sits in the valleys as the wind dies

down. This was the greatest shock to me to see such a spread of the pollution cancer, here in the South Pacific. The French are doing a good job on ruining one of the few potentially idyllic parts of our world. And for what! Prestige.

French Navy is cluttering up Papeete harbor - one large flat top and numerous destroyers and a few cruisers - also all sorts of smaller craft.

Tahiti is well named the "cancer of the Pacific" and it is rapidly spreading.

Saw Weber again this evening. He seems to be just drifting around in the Pacific - Noumea next. I wonder how he has the resources - or whether he has some scheme in what he is doing.

Later - Flight 822 left Papeete 50 minutes late - at 11:25. Some mad crash at airport. Mostly Americans with wives + sour faces. This plane (707) is enroute to Pago Pago → Honolulu

to Los Angeles. Flying time about 3 hours to Pago Pago — one hour earlier there.

May 25 - Saturday 9:20 PM. Written on New Zealand Airways flight 531 from Pago Pago to Auckland via Nandi.

Arrived Pago Pago about 2 AM local time on 22nd. Taxi to Hotel Intercontinental - about 7 miles from airport. Nice clean little airport. Intercontinental is a large and confusing establishment. My room # 15 is one half of a more or less square bungalow with a round thatched roof. Very picturesque place as I saw in daylight next AM. Nice beach - no surf - went swimming in afternoon. Bar is expensive - drinks \$5.4 each; beer 55¢. Only beer served is Haunani!

The town of Pago Pago is very small (The whole island of Tutuila has 28,000 - up 43% since 1960!! - highest birth rate of any American possession.) There is almost nothing here but some administrative buildings, general merchandise & trading stores, one bank, 2 bars (beer only) a native crafts shop and

Auckland weather announced as light 35
rain, Temp 59°F

Other essential installations. A pretty
shabby looking place. The natives here
are U.S. citizens.

Wanted leave for Apia the day of arrival
but was informed by Polynesian Airways
that their DC 4 was broken down & they
could not guarantee my return in time
on their DC 3 flights. I later learned
this was unfortunate advice because I
could have made it in view of the new
schedule via Air New Zealand.

The night of the 22nd was the night of
John Erdley's party - what an affair.
To bed about 2 AM. Would take too long
to write details.

The 23rd weather not too good - no
sun. Packed a box & mailed to
home - # 1.55. The Pango Pango Bar
- what a swinging place even though only
beer. Decibels are free as is the
dancing.

It is easy to keep up on world news
here because the hotel lobby has a tele-
type machine which feeds out all sorts
of news all day long - garble & garble
of yellow paper comes rolling out of it

Today (Friday 24th) was the day of the big riots in France - it would seem the country is almost at verge of a civil war.

Took cab to airport about 2:30 - The flight to Auckland left at 4. Put down at Nandi, 'Fiji' about 2 hours later. Perfect flight and right over Viti Levu. Curious haze below about 8000 feet - looks almost like smog, but very sharp interface with air above. A mystery - have never seen anything like it before - some taking off later to the SW over the sea. Blood red sunset over Pacific. Three hours later and now descending to Auckland - too rough to write more. Later -

Logan Park Motor Hotel - about 9 miles from airport - very nice accommodations. This is Sat night and the place crowded. Floor show for dinner guests only! To bed early.

Heavy rain tonight but mild
This is May 25 here

May 26

This is very confusing with the day change plus the time belt changes added in. Left Pago Pago at 4 PM May 24 and arrived Auckland at 8:50 PM May 25, local time

Up at 7 This AM and to airport about 8:15. The place was jammed. Two flights to Sydney within a half hour and both jammed.

Spent most of the flight time across to Sydney talking with Ted Quarry BOAC agent in San Francisco. He was terminating in Sydney after a continuous crossing from San Francisco.

San F. → Papeete → Nandi → Auckland → Sydney. A very intelligent chap. Has been with BOAC for 7 yrs

Weather in Sydney cold and blustery some showers - south wind. To Hotel Metropole by 11:30. Room cold but they have given me a heater.

May 27

- Peter Friend -

May 29 - Adelaide, S. Australia

This is written in my room in the Grosvenor Hotel. On Monday went down town and made a few purchases. It took nearly five hours to locate a replacement cable for the strobe light - the original I apparently left on Bora Bora. The only lamps in that dark room had burned out the night before and I must have missed it.

By good chance met a Mr Maurice Williams in the lounge of the Metropole. He is a member of the Legislative Assembly of Western Australia, and a very nice person. On Monday night he + Bill Schopf and I sat up until late sipping Bourbon.

Bill + Julie arrived about 11 on Monday night. They were quite tired but in good spirits. Yesterday AM I decided to go on to Adelaide rather than wait until Wed. AM. A wise decision I find. Plane to Adelaide via Melbourne at 6:10, changed at Melbourne and arrived here about 9 PM - fast service, but no food served on

either flight! Some old Ansett Ave as I remember on that hungry flight from Perth to Adelaide three years ago

Weather in Sydney yesterday bright and clear, but chilly. Had an hour talk with Bill + Julie in the lounge before leaving for airport at 5. They wanted to take me to dinner at the Towne House - where I ate on Sunday night.

Put up at the Grosvenor last night and wrote letters etc after a steak (fough) dinner in a small restaurant on next street up. Slept late. Mailed letters

Went to the afternoon session of the Australian Society for Microbiology. Mr. John Harris, the Secretary had left me a cordial letter and a program. They have put me on for the closing address Thursday AM at 11 !!

The quality of the papers I heard was excellent - each 30 minutes. The group is so small by U.S. standards - probably about 80 persons attending in toto - 2 concurrent sessions for $3\frac{1}{2}$ days. My paper will end the meetings. I detect a distinct element of scepticism

about our Pro E studies. Will be very interesting to see the reaction tomorrow

May 31. Perth, W. A.

The reaction was very favorable - to my hour-long talk in Adelaide yesterday. There were a number of questions and the discussion was terminated at about 1 P.M. Lunch was a swirgash bord affair at the Arkabar Restaurant - a large dine + dance place out in Fiddleston (?). Miss Barbara McDougal next to the So. Austr. Microbiological group piloted me around, back to the hotel and then to the geological office at 196 Beudle St. Had a long talk

→ with Helmut Wopffner. Plane to Perth was about an hour late - left Adelaide about 10:30. Arrived Perth about 12:30 local time which is 1 1/2 hrs different from Adelaide. The flight was much longer than scheduled since there were head winds at 30,000 ft of over 120 m.p.h.

May 31

~~June 2~~ Perth.

Up about 9:30 This AM and busy with errands all morning. Took

suit to dry cleaners and learned that I could not get it back until Tuesday! Monday is a holiday!! Founder's Day, about which nobody here seems to know very much except that it is a holiday. Parked a small box and mailed it home. Almost all the services one needs are within a block of this hotel - P.O., bank, news stores, drug stores etc. The hotel is ideally located.

Called at Geol. Survey this afternoon and had talk with Treadal. Joe Lord is in Canberra! Treadal got together all the maps + guides I will need about 10 lbs of stuff - which in the absence of my suit all goes well into the suitcase.

June 2 Perth 4:15 PM

Called Dorothy last night - it was amazing to hear her voice from 12,000 miles away and such a relief to talk with her - only it was difficult to understand her at times.

all of Perth closes up tight at noon

on Saturday - even the news shops
 But it is a "swinging" night socially
 as was Friday night. The night clubs
 keep going all night long, literally.
 The town is crawling with teen agers
 and young 20+ and both music and
 dancing goes on & on. There is a
 teen ager night club across the street
 on corner of Hay & Prior. The windows
 are all blacked out but the music
 goes on and on. Stayed in the lounge
 until about 3 AM Sat. and the
 place across the street was still in
 full swing when I went to bed.

Today is a quiet Sunday - the
 streets are almost deserted except for
 cars & buses. Weather pt cloudy & cool
 as it was yesterday - max temp about
 65° both days. Friday was rainy most
 of the day - some quite heavy showers,
 but they are welcomed here since there
 has been very little rain all of May.
 This is a considerably milder climate
 than Adelaide and much more stable
 as is the west coast of the U.S.

Wrote 6 letters yesterday and posted

Them. Will now get a letter off to D. getting dark now. I must be at airport by 4:30 AM. Plane to Roebourne. Avis car all set - will have a Falcon tomorrow & they tell me a Land Rover on Tuesday for as long as I need it. Avis in Sydney dealt directly with Roebourne and by-passed Perth, which caused much confusion here and several phone calls to Roebourne.

June 3 Monday - Roebourne

Difficult to keep track of the dates - plane to Roebourne (MMA) left Perth at 5:10 AM - stayed up most of the 2nd. Stopped at Geraldton, Carnarvon and Ouslow before landing at Roebourne. Plane a curious over wing Fokker, but well powered with 2 turbo-props. Nice not to have to look down on wings, but rather to look up.

This is really getting near the end of the world here. What an incredibly desolate country - no habitation except

These widely scattered towns. Poebourne airport is one room + much smaller than that at Bora Bora. The "terminal" would easily fit into the garage at home.

The center of life in this town is the Victoria Hotel. There is a small P.O., a police ^{sta}, one school + 2 churches, two general stores. Sidewalks of bituminous gravel are being built - no concrete sidewalks. There is a curiously casual air about this town probably because it is far removed from the tourist beat. Why the Avis agency is here is quite a mystery to me.

Weather absolutely clear - sun hot + temp prob 85° or so - but humidity very low. Vegetation in area arid to semi arid in that peculiar Australian way - scattered trees - eucalypts mostly amid the spinifex grass which forms endless clumps across thousands of miles of this country. Very few shrubs and nothing like our sage brush of the western US + Mexico.

Poebourne has a population of nearly

450, of whom 250 are aboriginals.

June 4 - Tuesday

Up at 7. Bought food + other supplies at the Roebourne Merchandise across the street. Mailed letter home. Mr Holt brought the vehicle to the Hotel - a somewhat tired large Toyota but the motor seems in good shape. Mileage on it 69331. Supplied with 20 gallons water + 10 extra gallons gasoline - Got everything in easily with lots of room to spare.

Mrs Holt tracked me down about 11 o'clock and informed me that an amateur rock dealer, a Mr Leah would be happy to lend me his compass for the week - how nice. Mrs Holt was driving around in the town school bus + piloted me to Leah's lapidary establishment and then home for a cup of coffee before dropping me at the Hotel - what more friendly treatment could one ever expect?

Left Roebourne at 12:20 on road to Wittenoom - 185 miles. Stopped

here & there for photography. Turned off at Python Pool and was surprised to see an excellent showing of upturned sediments exposed in a spectacular vertical outcrop above the small lake or pool. Thick bedded black chert. Collected 10 or 11 pieces. This is probably lower Fortescue - certainly Fortescue. There is an excellent exposure of the Fortescue Group on the road between here and the road (right) to Millstream. Most of the rest of the way is over quite flat & geologically uninteresting country clear to Wettenoom. The road follows north of the Fortescue valley, paralleling the north foot hills of the Hamersley Range which are far to the south. The mountains are not high, but form a continuous line. Got dark about 6 PM & arrived Wettenoom about 6:50.

There is a depressing abundance of dead kangaroos in the road - in all stages of decay. They run - or hop across the road and apparently there is a continuous fall from cars & trucks - which are exceedingly few

on this lonely stretch of country. In fact this is the most deserted country I have ever driven through. There is not one single habitation between Boabourne & Wittenoom - except a temporary RR maintenance camp about 75 miles from Roe. The new RR between Mt Tom Price & Port Hedland crosses the road twice - second crossing ca 95 miles from Roe. From here on there is nothing until I saw the lights of Wittenoom about 20 miles away. Brush fires - glow

Lots of kangaroos were hopping around in the brush about sundown. They scamper off from the road, but are hard to avoid hitting at times. An extraordinary sight along about 50 miles of the highway between Pt Hedland Rd & Yamprie ^{Forge Road} are the thousand of termite mounds from about 3 to 5 feet in height. They are brilliant red in color from these extraordinarily weather ferruginous soils & stretch endlessly across the landscape looking like miniature houses as far as the eye can see. The rolling spinifex covered hills & undulating plain have

a unique charm despite the arid austerity of this country.

The hotel at Witteroom is considerably larger than Roebourne, and the general air of the place less friendly + more formal probably because tourists frequent the place to a limited extent.

June 5 Wednesday

Studied geologic maps + field guides + descriptions for hours last night. All academic knowledge until got into the field this morning. First made a few purchases - esp a flashlight + checked car - 11 gallons gas + quart oil - also battery needed water.

Went south on road to Witteroom Gorge (This town is now officially Witteroom, not ~~Witteroom~~ Witteroom Gorge as it used to named - the Gorge is a geographic feature at the south end of a seven mile bitumen strip layed by the now defunct mines Victoria? and the large now. closing down Colonial Mine of Australian Blue Asbestos Pty Lt. - The road to the south ends in a rather unfriendly series of warnings to keep out. I went as far as possible to

the end of the road leading up to the abandoned Victoria? mine about 7 miles south of the town. For some reason or other there is still a mine manager here as I was informed by a woman who pulled up while I was deliberating going on. I followed her up to a fairly large dwelling ^{beyond the abandoned mine} at a fern-around & went back out of them walked back in. There is a beautiful exposure here of the base of the Brockman Iron Formation - the curious cross-laminate - inter-laminated iron formation.

On the way up the Gorge about a mile west of town identified the Wittenoom Dolomite - which has remarkable chert beds in it - lenticular up to 3-4" & many curious "pods" or semi nodules. There is an approach to this in the upper Gunflint, but not really the same. A very curious depositional situation both chemically & physically - It can't be the result of differential compaction as Trendall proposes.

The Wittenoom Dolomite is readily recognized by the large pure dolomite & mixed dolomite - shale units which

are quite nearly white when fresh, but quite granular, soft + sort of silty in aspect - they don't have the texture of good dolomite. Possibly this is partly due to the intense deep weathering here since ^{probably} Mesozoic time. Fortunately erosion along the canyon wall keeps bringing down fresh stuff. In fact it is a bit terrifying to collect here under an overhang reaching up hundreds of feet! The cherts out of the Witterncom dolomite look fresh + waxy + without pyrite - but are black in their fracture shivers, not brown.

About 3 PM started east on road to Pt. Hedlund + turned off to south (15 mi.) up Gampire Gorge Rd. Went up 13 miles + collected at 2 localities from the Breckman Iron Form. chert. This is in places very thickly bedded - 4-6" or more + very vitreous + fresh. Splinters badly under the hammer with razor-like shivers. Is translucent gray in their slices but markedly laminated.

Started down the Gorge about 4:45 and got to main road in time to face the most glaring western sun I have

ever seen - only a few diameters above the horizon and as strong as the mid-day it seemed. I drove on slowly to the west directly into it. It was still a glare when half way sunk into the horizon, and even when set the glow was such to make the road a problem to see. Decided to wait a few minutes, change films & started on - only to discover I had no headlights. Decided to go on as fast as possible to Witteroom or spend the night by the road. It was a wild drive into the western glare - the road only outlined by the refracted light from the spines on each side. Fortunately met no vehicle the 13 miles west to Witteroom where arrived in nearly full darkness with no lights. To Witteroom by 6:15.

Weather ideal - cool evenings with almost too cool but dry breeze. The day warm & intense sunshine - no clouds. This is an almost ideal "winter" climate - there is nothing like it in the U.S. for any season - perhaps could be matched in the highlands of Chihuahua, Mex

in the winter months.

Photographed one of the multitudinous giant ant hills this afternoon. It was a good 9 or 10 feet tall & hard as an adobe house. The construction is extraordinary with many curious large porous \bigcirc \bigcirc entries - the ~~cont~~ construction is conical pyramidal & the hills often taper sharply at the top to a steep cone. General aspect at a distance is pyramidal, but the perfection of shape is very variable. Many look like weathered talus boulders & of course in this country are exactly the same colour - iron red. A puzzling feature is the assemblage of roots (or stems?) at the base - I presume these are the remains of spinifex caught up in the expansion of the mound. The ants themselves come out when the mound is thumped, although not in great numbers. They, at least the ones I observed were quite small (ca 3 mm) very active and nearly black. I wonder how many years to make such a structure - it is an incredibly compact material not just dried sub-soil.

* June 5 - 11 PM - was told by a man with whom I met in shower room tonight that Robt Kennedy had been assassinated - can this be true??

On the way down the Gorge saw many small gray kangaroos, but also a large dark brown handsome haired 'roo who hopped off & stopped. Was too dark for pictures but I got out & approached him. He hopped off a ways & watched me. It was much larger than any of the hundreds of dead ones along the road and entirely different in color.

June 6. Thursday.

Another cloudless day over northwestern Australia. The brisk easterly wind all day yesterday and last night slowly died off and the morning seems warm, but comfortable. Left for Trendall's locality (near junction of Port Hedland road & the Gale River) about 10. Long drive over unfamiliar roads - about 70 miles. Found the Gale River by the big white eucalyptus in the main wash. Took some driving, but found his spot. Very interesting locality - the base of the Fortescue rocks (sediments & highly ferruginous) lie here completely unconformably on the deeply weathered Archean conglomeratic surface. The Archean rocks here are totally devoid

of iron + the contact is remarkable in color contrast - white saprolite below + bloody iron rich angular fragments, boulders etc. above. The Fortescue rocks are in a sense crumbling down into a "melting" basement. All this is revealed dramatically because of the erosion cutting of the Yule (Cooloowarie) river when it runs water. Whole area is now a series of dry washes + dammed easy to get lost in. Collected a good suite of the basal Fortescue chert - it is probably worthless for fossils since it appears to be re-crystallized + granular. Ca 30 lbs. After labelling rocks left at 4:10 for Wittenoom. Stopped a number of times on way back for photography. The 4 kangaroos I tried to get loped off soon. Also the herd⁵ of cattle (peculiar looking short horns) got away in a rush to the back in the setting sun. Arrived back in Wittenoom at 6 PM after a wild ride over the washboard road to get back in time for dinner. The incredible glare of the setting sun directly in front and the afterglow even worse. These ~~best~~ best Australian sunsets are incredible - the air is so absolutely clear

That the glow from the sky is almost impossible to look into and see the road ahead as well.

The Fortescue Hotel was hopping shortly after I arrived. As I later found out it was a charter flight of C.C.'s from Perth. Came in this evening from Port Hedland - a whole DC-3 full. Sat at a deserted table in the dining room & was soon joined by the flight crew - the Captain sat to my left, the stewardess to right, co-pilot opposite and members of the group to fill the table of 8 - a merry dinner. The Captain brought in several bottles of wine and the whole company was congenial. I was innocently engulfed by the festivity, but they were all so cordial & congenial to the "lovely American" - especially the stewardess Carol. She is the only female in the whole group on charter flight from Perth → Darwin + return - 8 days.

* The news was confirmed to me tonight that Rott Kennedy has died. This is another tragedy for the U.S. The Aussie here made little of it since he was apparently disabled and they - those who expressed

5 American Consul in Perth - Earl Cleveland

Their opinions were afraid he might become President.

June 7 - Friday 7:05 PM.

Written by the light of my campfire somewhere near Joffre Falls. Got here about sundown + spent the rest of the daylight collecting fire wood - Eucalyptus is extraordinarily heavy and makes the finest fire I have ever seen - no sparks + burns like charcoal except for a good flame.

Up Gampier Gorge today - excellent collecting. Too hot by the fire. Am sitting on front of my Toyota writing by a combination of moonlight + fire light. Can't even read what I write. This is a lovely spot - about 70 miles from Wittenoom over the the damndest road I have ever driven.

Stoked up the campfire + can see better. There is a gibbous moon but partly cloudy. It is dead ~~silence~~ silent here and I haven't even seen a kangaroo all day. No human beings. What a strange part of the world this is, and yet it grows on you. To be on your own is a fulfillment we don't know nor can imagine back home. To be sure I am com-

pletely dependant on my vehicle, but so would I be if I were on horseback. It is just quieter and more worrisome this way.

The eucalyptus logs are burning bright with a lovely quiet flame - have never seen any wood more perfect for a fire. The wood is very heavy - prob. would sink in water. This area has clearly had bush fire years ago so the wood is probably harder than normal.

The combined moonlight + fire light made it just possible to write, but am getting sleepy. Dead silence - not even a cricket. What a strange part of the world.

Slept from about 10 until 1 - cold - put on suit coat, more wood on fire & asleep again until 5. I saw a faint glow in the northeast at 5 - light, almost at 6 - the sun came over the eucalyptus + mulge at 7. Strange to see the dawn in this so utterly foreign landscape. My fire did well all night. Fortunately because am out of wood. Wood is extremely scarce in this part of

^{The world}
~~Sat~~ ^{July 8}

Drove back to Wittenoom early this afternoon - very tired. After dinner went to cinema. The theatre has 4 walls but

58* Found a gentleman in my bed tonight when I got back from the Cinema. Mr Johnson the Manager visited him. He was "lost"

no roof! Canvas seats + blankets are furnished. All very informal what with the children ~~messing~~ around + playing.

Pt cloudy to cloudy all day.

Am beginning to get weary of this isolated existence and going to the cinema only made it worse.

June 9 - Sunday - 6:55 PM

Am waiting patiently after working levels along left side of high way for the water to go down. This stream is too deep to ford even with the Toyota. Went in up to ~~water~~ wheel tops + locked out just in time to keep motor alive. Some trip from ~~to~~ Wittanoom.

Up at 7:30, early breakfast + decided to do more collecting along the Wittanoom Gorge Rd. Decided to leave for Roebourne today since Mr Johnson tells me that there are 40 C's coming in tonight + I may have to double up. Not for me. All packed + ready to leave at 8:50. Went down to Gorge + collected more chert etc. Started to rain. Has been working up to rain for the last 2 days, but all hell broke loose after noon. I had started out on the Tom Price

Road about 11 and watched the mountains disappear in rain - turned back after 15 miles out & returned to Wittenoom - a very good decision. On Roebourne road ran into sheets of rain - couldn't see the road ahead. Presently began fording "dry" streams bursting with water. Kept going as long as possible, although nearly bogged several times until near the 2nd crossing of the Tom Price - Dampier R.R., where the water was too high. Have set markers to see how level goes - seems to be going down slowly at 6:45. Have engine going & headlights on & watch. Still want to get to Roebourne tonight - 96 miles further on. Now totally dark. Am near the temporary R.R. camp - can see their lights to the NW.

7:30 - water still going down - but slowly - so slowly. Will put in another marker. The stream across the road is pretty swift & I hope not channelled below roadbed. This is a pretty primitive road. Not raining. Completely black night.

60 Rainfall in Roebourne on Sunday
= 5.5"

June 13 - Thursday - Roebourne

1. Mr William Johnson - Witteroom
2. The road to Tom Price - & return to Witteroom - The mountains were disappearing in the rain - creepy. Turned around & 30 miles back. Gasoline.
3. Crossed about 20 creeks - waded some - up to wheel tops - OK.
4. 75 mile camp R.R. - Went over the apron. Toyota floated down ~~the~~ stream like a row-boat. Swam out - close shave.

On Wednesday had another rain - only 2.5 inches.

Kentucky Tavern Day - The fare
Americans from Mantana - Mites
City - Dore + Russell -

RR camp

1. Mr. Greenwood - 75 mile
2. Harold + Jean Webb.
Perth.
3. Hon. Mr. Cunn
Min. for Interior. W.A.
(a nice man)
4. → Murray Bartlett.
Kiwi Friends = "
- * 5. Jean + Harold Webb -
Harry is the salt of the
earth. - a good man.
Spent many an hour together -
he is a good man - horse
& freight up in the bush -
N. Terr. He knows the country
- & loves it.

I was very ~~very~~ lucky to find good
people here in Roebourne - the
Webbs are tops when you are at
the bottom.

But more, Harry is a real nice

person - I wish there were more
like him in this ~~world~~ world.

Monday June 10 -

At RR camp all day. 10 men could not push the Toyota out of the stream bed. Finally got a Land Rover & plus the 10 and got it out & hauled it up to the camp "garage".

Wed. June 12.

Pouring rain all morning - the street outside east side of hotel a stream of water

Saturday June 15

Mrs Hold drove me out to the airport about 1 PM. Settled account with hotel - \$ 50. and Ron Holt - \$ 231. Waited at airport over an hour when we finally heard the plane coming in - 2 motor Jolher. They let me on & I hope I can get through to Perth.

First landing at Barrow Island. What a desolate place but a large oil storage depot - 4 tanks each 250,000 gallons. Pipe line goes out to sea 6 miles. Crude oil pumped out here

Next landing at ~~Exmouth~~ ^{Exmouth} ~~(Exmouth)~~
at 4:15. Rough & choppy.

Coming down at Carnarvon.

The river here has flowed in flood at 1 million gallons / second.

NASA tracking station is 3 miles east of town.

This is a ghastly looking water logged plain

Landed Geraldton about dark

Neville Stanley address = 28 Keane Pop Gr.

Landed Perth at 8:50. Put up at King Edward. Called Dorothy - got through at 1:30 AM. Could hear every word except some sounded peculiar. Bed at 3:30 AM.

June 16. Perth. Cloudy + threatening afternoon

Up at 11:30. Brought box up from downstairs - everything ok. Neville F. Stanley called about noon + invited me to dinner. Picked me up at 4 PM. A very pleasant evening. John Perry was there - an incredible character - can't stop talking but extraordinarily intelligent. Mrs Stanley (Maribel) was a very gracious hostess + a very personable and attractive woman. Their home comfortable large + ^{with} large yard.

June 17 Perth. Up at 8:30. Pouring rain. Got sent, checked plane sheet. Took cameras to Ambrose + Henry Minicella n.g. Bought a Canon - 2nd hand but excellent condition. A #144 including wide angle auxellion lens. Repair to Leica \$18.⁰⁰. Sent packages from P.O.A. #2.40

Called Neville Stanley at his office
 He offered to pick me up at 2 AM
 for airport. Got to airport about 2:30
 Raining. Qantas plane from Sydney
 on time & left on time. Heavy
 clouds to well beyond Carnarvon.

Came down in Singapore about
 8:50. Hotel Cathay about 9:50
 Good hotel on the Singapore hill. But
 a bit stuffy. Coat & tie for
 dinner, which I did not need.
 Walked around the Raffles forepart -
 and renewed memories of the geo-
 graphy. Clear & pleasant night.
 Air conditioned room - \$42.00 + tax

June 18.

Some day. Taxi down to Robin-
 son road - BOAC - MSA reservation
 OK to Djakarta. Walked up harbor
 front on the Queen Elizabeth Walk to
 Raffles. To China Trading Co - set
 aside some purchases. Back to Cathay
 Packed. Down to Amer. Express. Walked
 back to Raffles again - very hot.
 Left Cathay for airport at 4 PM.

Plane to Djakarta (M S A) a
 comet - very good service + very
 well piloted - all Indonesian. Very
 pretty hostesses - so much in contrast
 to the poor Australian girls. Weather
 good leaving Singapore. Landed
 in Djakarta in a downpour with
 thunder + lightning well around us.
 Umbrellas from aircraft to airport
 entrance saved my clothes + hand
 baggage, but the suit case was soaked
 again when it came in with the
 baggage from the hold. Was amazed
 when I walked into the airport to be
 greeted by an Indian gentleman who
 asked me if I were Prof. B. He had
 been asked by Air India (Frankfurt
 Germany request) to meet me. It was
 a godsend to have help ~~of~~ like this
 in an utterly strange city on a
 night like this. He piloted me through
 customs, got me transportation (not
 a cab, but Air India car) and took
 me to the hotel - Wesina Warta -
 he had met me with instructions to
 take me to The Indonesian Hotel.

68 Indonesian language has no written alphabet - use our Latin letters only.

I declined politely - as came here. After a few hours decided to go see the Indonesian Hotel and there discovered where all the Americans are. Another Intercontinental Hotel - same chain of U.S. Australian capital as the Pago Pago Intercontinental. Swarming with Americans + none here at Wesma Warta. The Indonesian is all air conditioned, this one has not even fans but is clean + neat + the service excellent - also it is large + just across the big circle (Indonesian Circle?) Apparently there is no accommodation in between.

I understand Dutch is well understood here by the natives as a second language. Nice to me I don't speak it.

Rained for several hours after I got to hotel. Went through about 2 miles of water flooded street + road on way. Me - tells me it will all be gone by A.M.

Coincidentally this is the 441st Anniversary of the founding of Jakarta and there is a big Fair going on - the first time the Javanese Fair has

been held in Djakarta.

Midnight - the rain has ended several hours & the humidity is going up fast as the water evaporates from the warm earth & road.

Talked for about 2 hours with a man by name of Stern who is a high-way engineer with AID, this evening - has been in Sumatra for 7 weeks & also Java for some months. Learned a lot about the problems of road & highway development - also the financial aspects through the World Bank program of survey, feasibility etc - but no time to chronicle it all. Will have to remember. The mind will never be a tape recorder - nor should it. We would all be unhappy in retrospect - or confused.

June 19 - Djakarta

I was all set to get off to Bali today on Garuda's 1:30 flight (0570⁰⁰ vt) but got a bit concerned over Garuda's recent safety record - one plane down in Bombay last week, and an open cabin door over Java two days ago. The

70 The Subarnu Tower is 110 meters high & has 25 kilos of gold in the top.

safety record of Indonesian airways (Garuda is a bird in Indonesian) is not enviable & somewhat of a joke around here, despite the extent of their operations. The other factors which turned the decision were the fact that I would have less than 24 hrs in Bali of which 12 would be at night plus 4 hours back (Convair 2 prop) to Djakarta. Also if I stay here until Fri AM will be free to get up to Bogor tomorrow. Plan to leave here tomorrow at 9:30.

This afternoon I tagged a rickshaw and went around this incredible sprawl of a city for almost $2\frac{1}{2}$ hours. See films - if they come out.

Cleaned up about 6:30 and went down to the bar for a drink. There was only one man there & he mistook me for someone else so we got to talking - his name Frans Bakker - from the Hague. Is $\frac{1}{2}$ Indonesian and an engineer by training. One of his ~~brothers~~ brothers graduated from MIT in electronic engineering. He was waiting for someone & went down to the dish to check. Brought

This the 441st year of founding 71
of Djakarta - signs & lights all over
the city

up a heavy set Chinese whom he introduced as Mr. Hau - Mr Hau invited me to dinner with him & the three of us went off in a chauffeured V.W. to the best restaurant in Djakarta Chinatown (Most of the Chinese in Java were butchered a few years ago before Suharno went out) - Name of restaurant = "Sim Yan" in Petak Sembilan 3 No 51, Djakarta - Kota. When we walked in there were three other Chinese sitting at the table. After cordial introductions we started a real Chinese dinner. 1. Shark fin soup 2. Shrimps 3. Roasted pork 4. Chicken 5. Soya "pudding cakes"? with fish and of course rice. An excellent meal. The Chinese drank Chinese wine with their meal, but sparingly.

It transpires that Mr Hau is one of the real big wheels in Hong Kong & Mr Bakker is a technical advisor on one of his new projects in Djakarta. Hau told me he has 11 factories now operating in Java. He was very cordial and I felt I had an exceptional evening.

72 Indonesian trains have the same high pitched squeal that European trains have

There is no time to recount the story of the kris - I shall never forget it. Probably the best bargain I ever bought in my life and fully authenticated in detail by Frans Babler who told me the same. Best estimate of age = 400 years + origin = Central Java. Details in my memory.

No sun today. Excessively humid to-night and no wind or breath of air. There are no fans in this hotel but it is easy to escape by going across the creek to the Indonesian where everything is air conditioned (except the open-air lobby!) But is comfortable when you are germt

Frans Babler tells me he has quite often seen the name Elso - says it is Friesian, not Dutch! What is the difference. Say Friesians speak a different language - is it true? Also that the Friesians are, if not a miserly people, are wealthy because of their habits. also commented on their distinctive architecture in buildings & houses.

Population of Indonesia now 73
110 M - of which 70 M live on Java alone

June 20 - Djakarta

My car & driver arrived promptly
at 9:30. Got ticket from IAL
and OKed for tomorrow's flight
at 7 AM to Singapore

Drove up to Bogor 10 - 11:15
Almost continuous "village" and
stores for miles out of Djakarta.

Road - super highway to the Djakarta
by-pass & then wide 2 lane to
Bogor - not a bad road but ex-
cessive traffic. It is said to be
very bad on weekends.

Bogor is a great change from
Djakarta - streets generally wide &
the town (110,000) seems so open
compared to parts of Djakarta in
credible congestion, i.e. in the older
parts of the city. Much cooler also
even though only 1700 ft above sea
level. The mountains are fairly close
to the south. This is beautiful country
and I want to see more of it.

It pales much of Central America.

The soils here seem to be in-
credibly rich - deeply weathered

volcanics - weathering? Deep-
rich red. Stream boulders all
intrusive weathered remnants - prob.
andesites + gabbros^{etc} - saw no un-
weathered basalt.

Fortunately Dr Dmy. was at the
herbarium and he showed us through
the garden - by car - He said we
saw as much in two hours as
would take 2 days on foot. Very
nice + friendly person. I took the
driver + him to lunch - very good
reunion - Poured rain at lunch
hour, but left about 2:45 + no
more rain back to Djoharta

My evening rickshaw adventures
+ the purchase of silver - no time
to record. Have to be up at 5:30
AM tomorrow for plane back to
Singapore.

June 21 -

Left Kemoraya Airport JAL #
at 7 AM.

Weather clear + took 25 feet over
coast of Sumatra. On 2nd time

The camera worked perfectly to 10 feet - then on landing in Singapore under perfect conditions for photography - full east sun looking west the spool failed to turn - a complete mystery - Unfortunately opened camera and probably lost most or all of roll 16 - one of my best. Same luck as before the flood in Australia. Got to Cathay Hotel at 9:40. Weather OK.

No mail - Letter Paris after. The Englishman I met in Djakarta a couple of days ago crowed up to the fact that he had killed a rickshaw-man in Djakarta on the street the other night and critically, probably fatally wounded his two passengers. He had the option presented by the police of either waiting for legal process in three months time, or paying the funeral & other anticipated expenses. He paid and left Indonesia on my flight this AM. How cheap can human life be!

The East is East & the West is West - A morbid but true story and who

would ever know it?

Had dinner tonight with a former Hungarian, now of Melbourne Australia & obviously successful. - some stories of eastern Europe. He has or had lived in Java for nearly 13 years. Also some stories. Don't begining to create Indonesia in a variety of ways - more contrary really to my own impression of the country & its people. What to do for these poor creatures of a culture which is still centuries behind the times of Western Civilization. Don't agree it is true that, as one of my friends said the other night - one Chinese is worth 20 Indonesians - in terms of work & industry. But how artistic these people are - and for what. Their meticulous labor brings almost nothing except to the middle man - usually the Chinese, occasionally the Indian.

Spent one hour & half at China Trading Co. - at rate of \$2.00 per hour. I think the Chinese were good but we will see. I suspect that the "old ivory" game is one of careful emptor - an

The blue movie was pretty awa - 77
technical photography

also old jade as opposed to new
jade. New ivory is a dead gut-wag
Weather good all day.

June 22

Made business quickly in Singapore
- spent too much - \$250 for jade &
ivory etc.

Back to Cithoy - met Mr de Gindler
- talked & drank all evening. A re-
markably interesting eastern European
Hapsburg. Hungarian - now Austral-
ian - Melbourne - Black & Dieler;
representative for SE Asia for the
company. Lived in Java for 8 years
then Australia in a "woman's country"!

June 23. A wasted day in some ways,
not in others. In fact a remarkable
day in some respects. Sunday in
Singapore

June 24 Up early this AM. Malayan -
Singapore Fl. # 856 to Hong Kong via
Kuala Lumpur. Left Singapore 11:15
Very tired - slept part of flight. Brief
between Sing. & K.L. Lunch after
leaving K.L. - excellent tender filet

78 Shirley Wong -

of choiced N.2. beef. Weather excellent and passed to east of South Vietnam coast on way to Hong Kong. Several hundred miles along the coast of Vietnam (South Vietnam) - Where the coast goes off to the west went out over the S. China Sea to H.K. Landed H.K. in a thunderstorm. Is much more humid & warm here than in Singapore. What to say about what I saw - along the coast of Viet Nam? Unbelievable. And the mountains and the forest to the west looked just like northern Malaysia - why do we have to struggle over this miserable part of South East Asia? - at such cost in lives and human resource. Of course human resource means little here as I learned the other day in Sing. from my British friend from Djakarta who killed a red-shaw man and paid off to get out!! - or else wait three months for due legal process.

June 26.

It sank into the sea - the sun over western China - How far have I been to see this, the day over Hong Kong and the east China coast - A few Americans are here, but very few. I feel alone for the first time in a long time. Wanted to stop in Taipei, but not possible - Strange place the far East - was unable to ~~get~~ visa in Hong Kong in time. Stayed in small hotel Akabane not far from airport. The charm that Tokyo had for me last summer has disappeared - too much travelling jells over interest.

June 27 - Thursday

Waiting at airport for Honolulu flight. Weather quite cool, Hong Kong was unbearable, by comparison with Singapore. But the flight from Singapore to Tokyo was a fascinating although tiring one. Left Singapore about 11.15 - stopped Kuala Lumpur and as noted before passed off coast of Vietnam for several hundred miles - from south of the Mekong delta to

where the coast of Vietnam goes off to the northwest in the South China Sea. Then over a number of large islands before coming down to Hong Kong. Weather not good. Heavy overcast coming in to Hong Kong (Kowloon Airport on the mainland.) Got taxi after clearing H.K. airport quickly. The driver had a call on the way to the ferry to go back to airport, so had a fair tour of Kowloon (looks like the shopping & small business areas of H.K. - quite similar if otherwise). Ferry ride over to Hong Kong was something never to be forgotten. That cluster of buildings on the narrow coasted foreland and ^{on} the steep hills of Hongkong Island is incredible. They are all so new & all look alike except for height & width. Almost like a gigantic cluster of gravestones in an old New England cemetery. The harbor is jammed with ships & craft of every description. Crossing takes about 10-15 minutes. Got to the Mandarin well before sunset (daylight ended after 7:30). Spent part of the first

day in HK walking around + looking at shops etc. This is probably the bargain city of the world - even more so than Singapore in some ways, but also requires more judgment in buying. The place is a real dynamic city. Even though it is still a British Crown Colony, there is no evidence of this. Except for a scattering of Europeans + Americans, many of whom cluster around the Cathay Hotel, the city is about pure Chinese. Population now over 4 M.

Today about 8 bodies were recovered from HK harbor - apparently butchered by the Red Chinese up the Pearl River + thrown in the river. Estimated they were killed 4-6 weeks ago.

Left HK on a sweltering afternoon.

June 27 (2nd one) - Honolulu

Pan Am Flight 2 was delayed over an hour "last night" in Tokyo - radio trouble. Sat in Hawaii airport lounge from 7 PM until 10:20 - then in the plane for another hour + half before take-off. It was a long (7 hours) flight to Honolulu + rough most of the way. Suc-

ceeded in getting about 3 hours of indifferent sleep. This is a really rough trap for sleep & orientation. Five hours time difference between Tokyo & Honolulu & also the date difference - or rather parity. Arrived Hon. about 12:15. Honolulu airport is becoming a mad-house with all the U.S. tourist traffic. Got in at the Reef Tower about 1:30. Spent until 3:15 at United Air office to confirm ticket for tomorrow's flight - there are so many people waiting to get reservations that you are name listed & called in turn - had to wait about 40 minutes just to get ticket changed. Saw Sandy Siegel & Barbara Siegel tonight for a brief drink at the Reef - they drove down from home to bed about 2 AM. ~~UP~~

June 28 - Los Angeles.

Sandy picked me up at the hotel this AM at 9:30 & spent the morning with him & A.C. Smith at the University. Had lunch and AC drove me to airport. Very nice of him because it is a nasty drive. The United Airlines flight ^{2 PM} back was jam packed with U.S. tourists & had to sit

through a movie on flight. This is
an imposition because all the curtains
are drawn and it is difficult to read
even in broad daylight. Arrived Los Angeles
at 10:15 local time - almost 5 hours
flying time. Damp & cool here. Checked
in at International Hotel about 11:15 PM.

June 29

~~To Pjajakarta~~

GARUDA

FROM - DJAKARTA

To Bali

7⁰⁰ am →

Diana HUNKUEN

~~FHG~~

FHG

Diana HUNKUEN

Fagotogo Tutuilu

am. S. 44

Anwarj Dilmy Director Herbarium
Bozpo Bot. Gard.

Kostermans — botanist

Doel Soejarto

June 4

Local. A-68-1

Chert cobbles + pebbles from
Fortescue group collected at
Python Pool

Bed rock here is vertically
standing ferruginous shales with
thick black chert beds interbedded
Excellent exposure on east vertical
face directly over Python Pool
Probably lower Fortescue. 9 samples

June 5 A-68-2

Chert "pods" in place, some
leaves 3-4 feet long + 3"-4"
thick. Alternate with dolomite? + gray
shale. About 1 mile ^W of
Wittenoom on S side of road to
gorge. = Wittenoom Dolomite X
(is at base of the ^{entire} exposed sequence
on the north flanks of mountains)
about 15 samples

June 5 A-68-3

Chert + dolomite? from
Wittenoom dolomite on road to
Wittenoom Gorge 2 mi S. Wittenoom
6 pieces

June 5 A-68-4 -

Black chert from massive 4"-5" bedded in iron formation, Upper Brockman. on left of road up Yampire gorge 13.8 miles from turnoff to south off the Wittenoom - Port Hedland road - chert is gray in thin slivers. Very vitreous + hard

June 5 A-68-5 - Same road as locality 4 except up .5 miles up gorge. Pieces from fresh fragments broken out of a sheer outcrop of the finely bedded facies of the upper Brockman. Shaly iron formation chiefly with thin black chert beds. No large beds observed

June 6 A-68-6 - 17 specimens chert from base of Fortescue series - Trendall's locality exactly - helluva place to find. chert poor - recrystallized - spent 2 hours in area but nothing better. The locality is very interesting however, because the Fortescue sediments are crumbling down onto the Archean supraproteric volcanic

sediments. & the contact is remarkable - the Archean rocks are completely free of iron & weather white. Valley of the Coshoctone River - Tributary of the Yule. 200 - 300 yards west of road crossing Port Hedlund road

June 7 - A-68-7

chert blocks from talus directly off the Wittenoom dolomite formation. Weathering is apparently chiefly thermal - form blocky fragments. Location about 3 miles from Witt. → Pt. Hedlund highway on road up ^{to} Yampire Gorge.

June 7 A-68-8. (3 pieces)

Blocky finely bedded chert + iron formation - Upper Wittenoom dolomite - about 2 miles up gorge from A-68-7

A-68-9 - 10 pieces incl.

blue ^{or} crinoidite + blue shale - others all black chert

From lower Brockman Iron Form where road ^{up} Yampire gorge crosses wash (river bed) ca 8 mi from Wittenoom Port Hedlund road

June 8 A-68-10

black to gray chert - some finely bedded. Same locality as A-68-4 but different blocks. Middle to lower Brockman Iron Form.

June 9. A-68-11

Same outcrop as A-68-2, but wide selection of different chert exposures. Fine grained but highly brecciated. Chert occurs in pods or boudins in a ~~siliceous~~ siliceous dolomite? - or quartzite?.

Numerous samples

June 9 A-68-12

Same outcrop as locality 3. Mixed bag of Wittenoom chert & basal Brockman facies - mostly stream gravel ~~pep~~ pebbles - can only come from these two units

June 9. A-68-13

chert weathered out of the Pfb or ~~PSJ~~ ~~PSJ~~ - Fine grained - from Roebourne Wittenoom road near Tambrey Station exactly 75 miles from Wittenoom. W side of main road

June 9. A-68-14 - 5:05 PM

Chert - cobbles + residue - from west of Tambo station - from ~~PS~~ PS group. Collected at rising stream crossing just west of where left the stranded car which could not ford stream - exactly 9.4 mi NW of Witteroom on highway to ~~the~~ Roebourne. Test made crossing - water nearly to wheel tops. Still raining.

* → Fine grained chert. = Fortescue group. Only other possibility is Mamba formation.

* → = 2.4 miles east of Kanjenjic station sign on Roebourne highway.

Large stream crossing where collected - must be on map - I can't find on Hamersley Regional Sheet.

getting dark - must go on. Still raining.

3
7

[Faint, illegible handwritten text, possibly bleed-through from the reverse side of the page. The text is arranged in several columns and appears to be a list or a set of notes.]

Roll # 16

Begonia Bogor Botanical
garden, Java

17

18

19 Hong Kong ?

20 Hong Kong ? — Hawaii
?

21 Los Angeles to east -
incl. Coastal Range - Cole. Plat.
Rocky Mtns

22 - Rocky Mtns Front - to
Carlsbad

Roll #12 Singapore June 18
New camera

Roll #13 - Plane flight from Singapore starts at airport - some scenes (poor) from plane. Ends in Djakarta - unfortunately cloudy weather + no sun since I arrived.

Roll #14 Djakarta - begins with views from hotel verandah + ends at some point during rickshaw ride through city - scenes of Subarnas "prinsip" monument + the Djakarta Fair grounds.

Roll #15 Begin ^{June 19} on rickshaw ride in Djakarta. Ends ^{June 20} in Bogor Botanical Garden with scenes of Subarnas exile "palace" Picture of latter taken through the top of the barbed wired fence.

在

中

9

June 5 - Begins at abandoned
 asbestos mine (Victoria?), Scenes
 enroute Witteroom to intersection
 to road to Gampire Gorge - Hammerley
 Range north flank - Witteroom dolomite
 with overlying Brockman Iron Form.
 Spinifex covered hills - strange color
 Scenes coming down Gampire Gorge
 - also the giant ant hills on way
 up gorge. Sunset on road to Witteroom
 Ends at cross of tracks to
 Mulga Downs + Cowra - 12
 noon June 6

10

June 7 -

Begins on way to Treedall
 locality on Witteroom → Pt. Hedland
 Rd. Ends at old abandoned mine
 on road up Gampire Gorge June 7

11

June 7. Friday.

Begins on road up Gampire Gorge
 late afternoon. Ends looking back
 south to Hammerley Range on Sunday
 noon June 9th.

Lost in flood June 9

+ near sunset

up Gaupire Gorge, Ant hills - huge!
 Ends June 5 looking into ^{SUNSET} ~~ascent~~
 on road to Wittensom.

35 mm

Roll # 5 - June 6, '68

Ends with camp fire at Joffre
 Falls - June 8. Pictures of Fortescue
 group. Contact with Archean saproletes -
 scenes on road back to Wittensom.

Scenes on road up Gaupire Gorge -
 to campsite.

Roll # 6. - June 8

* Begins at Joffre Falls campsite.
 (This roll lost in the flood
 June 9)

Roll # 7

Begins Singapore June 18
 Harbor + street scenes.

Some probably w/ flash pictures
 Bogor Botanical garden Ends
 with Sjahrir's "palace"

Roll # 8

Begins

Film Record

#5 - May 26. Begins Sydney Bot. Garden. Street scenes from Hotel Window -

#6 - May 28 Begins street scenes Sydney - ends street scenes in Perth. June 1 (No pictures neither 35 mm or one taken between Sydney + Perth

#7 June 1. Perth W.A.
Finished June 3 on plane from Perth to Roebourne - scenes from air between Ourlow and Roebourne

#8 Begins June 3 approaching Roebourne - Roebourne airport + pan from Hotel Victoria balcony late afternoon. Ends at abandoned asbestos mine (Victoria? - not the Colonial - Colonial mine appears near end of roll also - closed down 18 mo. ago

250

35 MM Color

Film record goes from left to right
in this book

35 mm Roll # 1

Frame 1 -

May
17-18

Ends on plane

Roll 2 - (some pictures lost)

Begins on plane enroute to

May 19

Bora Bora

- May
20

Ends the evening of the beach
banquet at Bora Bora - last
picture is flash - of mvuru on
pillow

May
21

Roll # 3. - Loaded OK

First pictures at Bora Bora
Close ups of Mt. Oroa grounds

Hebiscus flower - May 22

Hotel Intercontinental grounds
and Page Page bar

Some flash pictures at Hotel Inter
Finished at Python Pool
on way to Wittenoom 6/4/65

Roll # 4 Various en route to Wittenoom

9 is exposure at collecting
locality 2 (A-68-2) ✓

MOVIES

251

Film Record - goes from right to left in this book

8 mm # 1. First pictures taken
5/16-19 approaching Mexico City (UV filter
+ x4 neutral. Later approaching
Acapulco with cloud pictures betw.
Mex. C. + Acapulco. Ground of Villa
Vera

8 mm # 2. Plane to Bora Bora,
5/19 to 5/20 Last frames of octopus in
Bora Bora lagoon

8 mm # 3 Starts at Bora Bora
under Pago Pago - (last
six feet not exposed because
of change to Perutz roll)

4 - Starts with Matson Line
May 23 - cruise ship leaving harbor
of Pago Pago.
Flight over Viti Levu, Fiji
and landing at Nandi
Ends in Sydney Botanic
garden late afternoon 8 May 26

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