

Feb. 25/63
False Bay East side

Lichens

No Penguins

2 beaches on west & har
ruined beaches for

25 chin straps
nesting
evident

good lichens

s.w. ponds

Next point bet False bay
& Charles Bay Penguin
colony up 400 feet
probably chin straps

Seals, N. entrance to
South Bay Seals in
s.w. pools!!

Notes Sam Condr. Lewis
Feb. 25, 1963

— Spring Point —

5000 yds high
horizontal wing tips
on top

Penguin
for all the all

blunt bill fork
tail below
dark above

black patch
behind eye

seen at Spring
Point

South coast Feb 24th
~~East~~ coast 1963

Trinity, most
rocks & islets

had penguins

~~all little islands~~
~~Shags small~~

Tremendous colony shags
dip

S.W. dip. of Trinity
small island high

cliffs carpeted with
mosses & lichens

too small to build
side. | spent 1 day
side western exposure

Feb 24 - 63

Gentoo on Beach
id + refuge hunt

Chinstrap on
far side of
Shuttle Pt. Permin
on cliff 50 to 100
feet high several
jumped over to
rocks below in
fright of helicopter.

Mikkelsen 1st

many ads + notes in
Bags.

~~Mudus Ids~~
Mudus Id was reported as
on Feb. 23?

Cyanea antarctica
large jelly fish 2 1/2 ft
~~Coreana~~

Moss samples are very moist

Shoys (Feb. 2 ^{after noon})
~~Skua nests~~
an cliff to west
of Argentin station

small petrel beyond
headland.

Speckled bird black
stripes over on black
eye

~~Argentine Blue Paradise~~
Rain today off wind a
white snows rest
in sky

Penquin ear
and Bayde dit. Point
before getting to hut.

is one
of

~~one~~ saw a few Wilson's petrels
(one)

Feb 2nd 1963
088 at 8:30 headland

Chin straps + Genders of
blue shags (1 pair)

limited nos. also on Base

Id,

Beyond Base
Ch. Jean

~~1 hr lost changing
clothes~~

Steep cliffs had more
moss + grass than
rookeries which in
general close to birds
has less + in more
cases practically none

Bow Range + pier



Argentine
sta

10/11

Would like to make
comparison in un-
labeled
pensions, reports
of annual loss

Institute Antarctica

Argentino, B.A.

Or Nur Hbr 2nd
time

Feb

Handful
adapters
no other than
saw one chi
~~Paralase has
more~~

Water frozen in
pods in place
about

Daily (Chile) Notes in notes
 Cape Negrovil. } 6 m or
 Chilean Univ. } biol. or
 } allied
 } research
 } soil sci
 } terrestrial
 bryophyte mats
 Signy Id (Biol. to be for
 South Orkneys 63-64

Hydrographic off
 S.W. side of ~~Delapide Id~~
 with Bad Ice may
 work further north
 Areas will be in middle
 of British observatn

Id
 Signy new programme of
 marine biol. range of
 conditions // plant and
 animal communities of
 sub-tropical Markings of
 seals & Petrels
 & Cape Pigeons

Above notes from Daily Paper. -

Orlley Bay Emperor Penguin

Scotia arc

^{Bryoph} Polytichaceae
Deschampsia

South Ga. Biol (Seals)

Orlley Bay Biol. (Emperor Penguins)

Signy Biol.

Summer, special activities

M.V. Kish Dan.

Seal + Emperor Penguins

Summer Season Personnel

1 mar. Biol.

~~62-63. Ships relieved.~~

14 Nov. hand Dickell on Bird Id
(South Ga.)

una mujer es tan joven co-
mo lo ~~afante~~. -

VINA MUJER ES TAN JOVEN COMO LO
APARENTA. - PERO UN HOMBRE ~~ES~~

~~TAN JOVEN~~ LO ES TANTO CUAN-

TO LAS MIRA

Feb. 5.

L. Sel

UNA MUJER ES TAN JOVEN.
COMO ~~SE~~ SE VE. PERO UN HOM-
BRE ES JOVEN HASTA CUANDO
NO LAS VE.

Fish sounds
SAR sonar man
Oceanos. Texts for
oceanography
do be receipted for like
instruments if these are

Banks wild dog + air

mile ^{over} 9/4 000

Whefield
Bany

Grass ^{Unis.} Birming
Iles dan ^{ried}
Deschampsia
Antarctica

Peterman Id
Has large ^{her}
covered areas
photos showed some

Several acres
in extent

on steep north
facing slopes
of Peterman

Falkland Ids

Pretman B Sloman
#1 Repr

The Vegetation of the
Argentine Ids
& highland area
with high ref
to Falkland Id
G. J. R. B. Sc

Most education for
Physical studies

Quite diff. from
Biol

The trash, about
the oil drums and what
not obviated
re floating laboratory

Trashed up grounds
seem to be rule in
hierarchical irrespec.
tive of nationality

Polluelas (? young or
larvae

Feb. 29th / 63

Most of afternoon (I
went to say day in
Gerlache St.

Cobulesco Id. like
Chilean Paradise Wbr.
Id. is snow free area
and more or less (perhaps)
in elevation

Charles Franz Commodore
giving dist. of Angies and
Sni

~~Trails~~ Feb. 16/63
ice

edge, seals, &
some crabs

Feb. 16 - 1963 Jan

Feb 15. 1963

One emperor
penguin was
seen today and
during time and
but groups of
Adelies on ice
on way out to
sea.

1.00 P. M Feb. 16

Berg 7,500 yds

$\frac{1}{10}$ as long

50 to 100 feet
high

an $\frac{1}{4}$ mile
long

40 or more days

night or more

all granular foggy

is white and

malicious yellow
green

becoming + dark
in afternoon
on the hill id.

Miss Melina

Slight one
may kill

under her belt
here

may seal
fear over fear here

Yan Keel Wbr Feb 13

Frighten ten Penguins

Virtually Justice

2 or 3 chin straps

1 a chick all

nest Gentoo

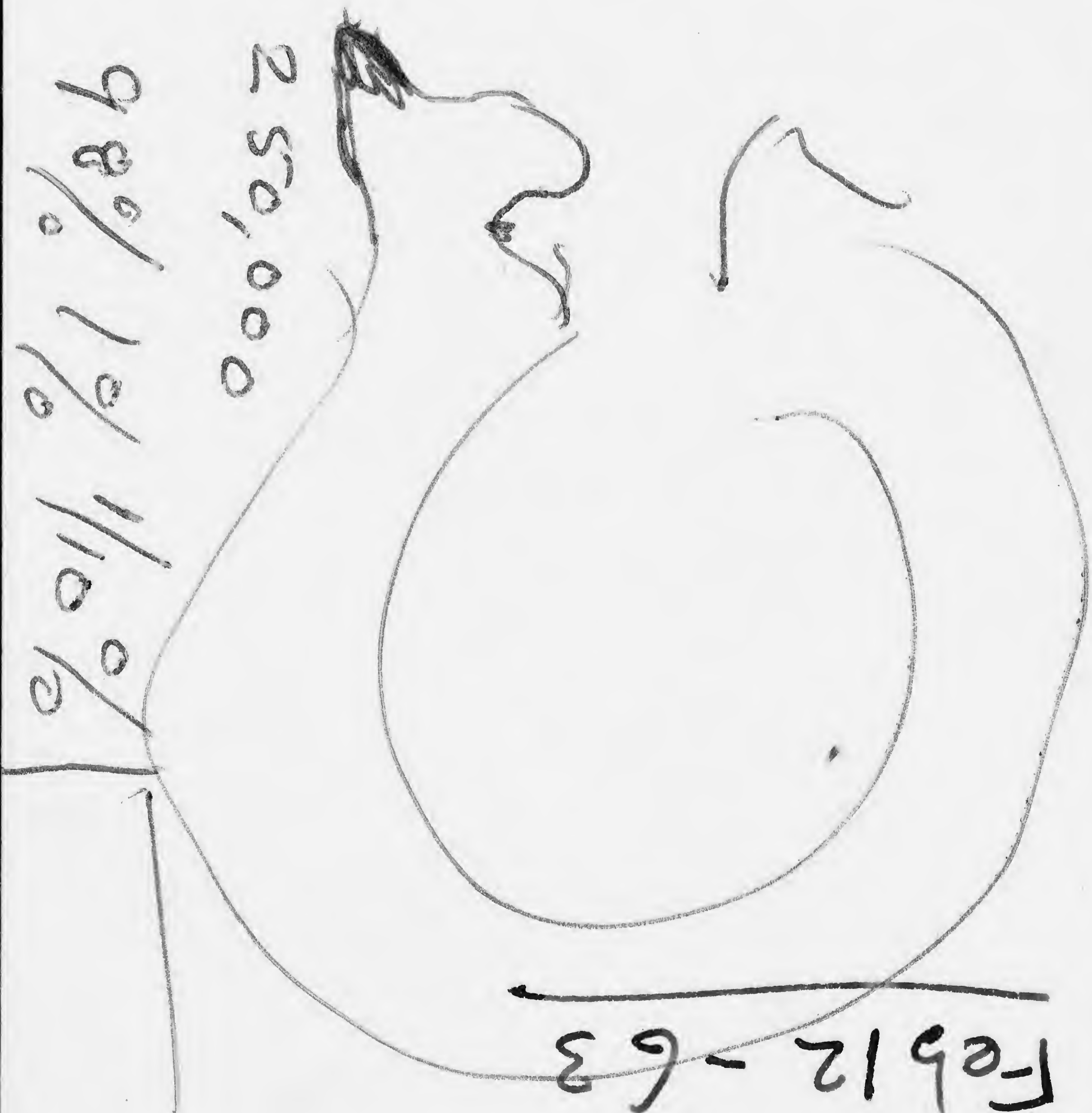
Greenich Id.

Reception Rd Feb 12 / 63

Same still familiar profile landscape

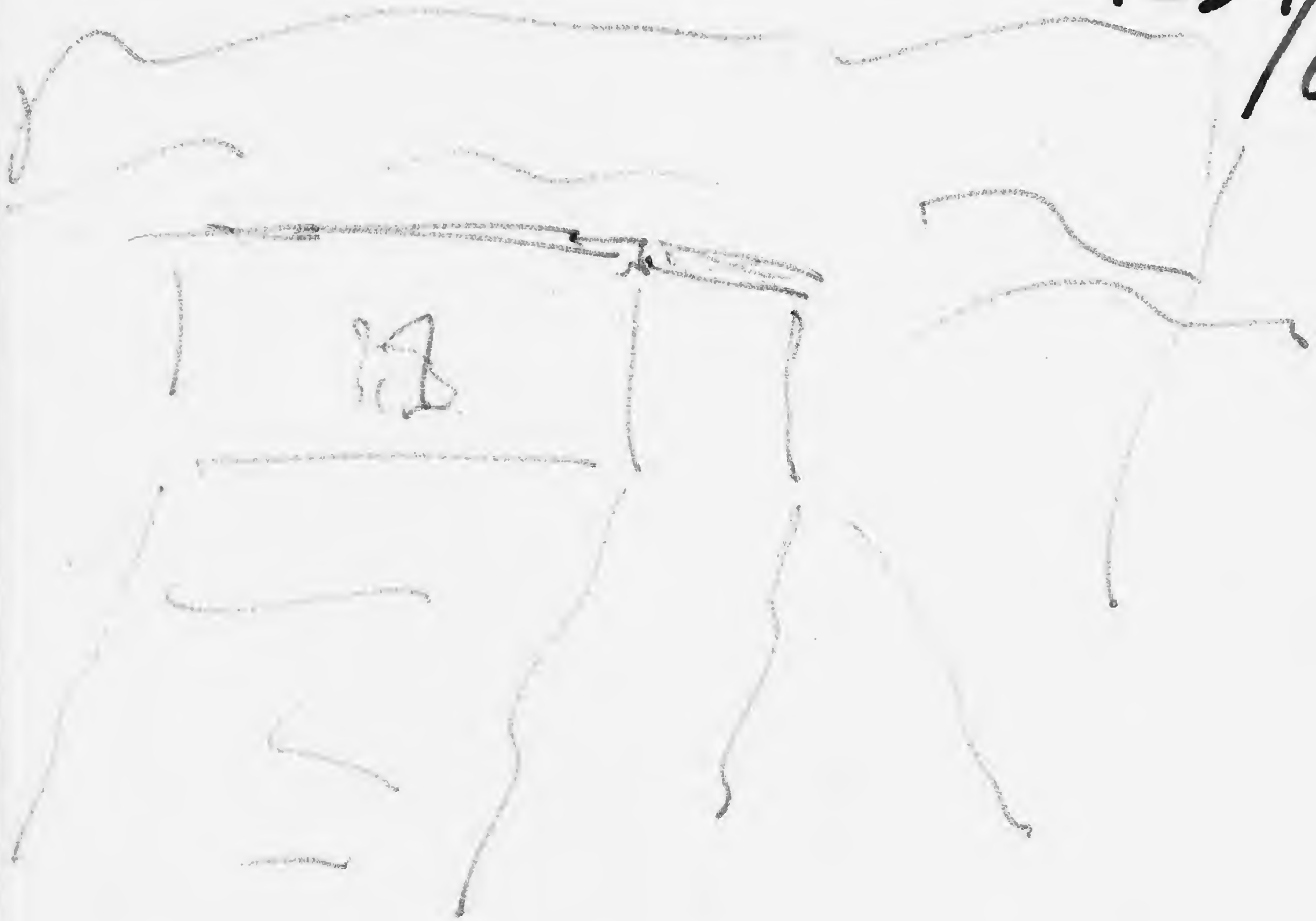


Feb 12 - 63



Aspe Bay
Anemones

Feb 9/
/63



Wind from S.W.
54° standing in sun
in lee of wheel house
side which is warm
to hand. Beside therm
box is high above sea ^{water line}
64 feet right at tip
of my nose

64 ft
W.L.

Feb. 8/53 (Feb. 8 notes)
Lapayere Bay

Gourdon Pen.

Patagonia Bay ^{in here}
~~Patagonia Bay~~ ^{at 12.50}
p.m.

Thompson Pen.

Fournier Bay
around ^{Newmeyer} channel

Through the blackish

fog the still black snow
free streak (ridges of steep
mountains look like clouds of
volcanic smoke from eruptions
rather startling to step out side
and feel you are looking at a
smoking volcano

over for sketches



Feb. ~~27~~ 7/63

2:50 p.m.

Bay View

Gardner +

Frankson

Spencer

at the picnic

Reached in

at the picnic

Spencer from picnic

to see the dog

at the picnic

at the picnic

we got Darwin Bay

Traps, bait.

dip net 4ge

Tow net

Bottles

Bucket in rope for water

Bucket. 1/ft

Small dredge

Plastic Bags.

Glasses, field

Camera

Exp. meter.

22 Feb. 7 - 1963
14/12/11

Lahaie Pt. Aulus
Peninsula at 6:10 p.m.

Base Aul (Gaudier
Pt. Lockroy Id.

Running through
layers + raising fog
all day considerable rain
most of it in A.M.
went for traps at 6:30 a.m.

35° Low 37° High, 6:05 p.m.

(Nunatak Negra)

36

Spigot Pt. Aulus
~~Argentine Base~~

Like Luxen + Pen
Argentine Base
Paradise Wb.

Feb. 7-1933
To right we passed Spryatt
Point, #38 carrying chin-
strap penguin rookery →
which otherwise would be
excellent base

Feb. 7. 12.50 p.m.
Patagonia
Bay bet. Gouardon
& Thompson Peninsulas
On boat headed in to
show ice cliff, little
islet off Thompson
peninsula to right of
ship; ^{one} looking back to-
ward stern to entrance
of Bay

Feb. 7 1963
Thomson Peninsula

Archowski " "
~~lets get by the [unclear] office~~
Ice streams by

Langans in the
Tropics (Torkugas)

Ice cliff in all directions
Saw very few / saw
one penguin rookery
 This just before
 mid day

Feb 5/63

On a mission of
this sort you hear
many things right
a word. The other
half of my expedition
is found in the
handwritten log
book of the small
boat.

It is the navy that
will determine the
the Palmer Island
station is to be estab-
lished because they
are still the subject
face

Feb. 5/1963
1:15 P.M. Su. Cap
Anna passed
just off ship
Id where Jack
landed far east
has shell base
and shell base
Cuthberts
found sub shells
board

Cuverville Id.

Sketches inside



Photo'd this but Feb. 5/63
missed lower half of
as ridge obscured by
boulders
no close
before I got at camera.
Face against rock cliff.
Point ^{heavily} or over it? secondary hear



eyes were
 jutting
 snow
 free part
 as was
 sideburn
 ears
 cheeks
 + nose
 + nose
 Δ
 path
 on left
 cheek

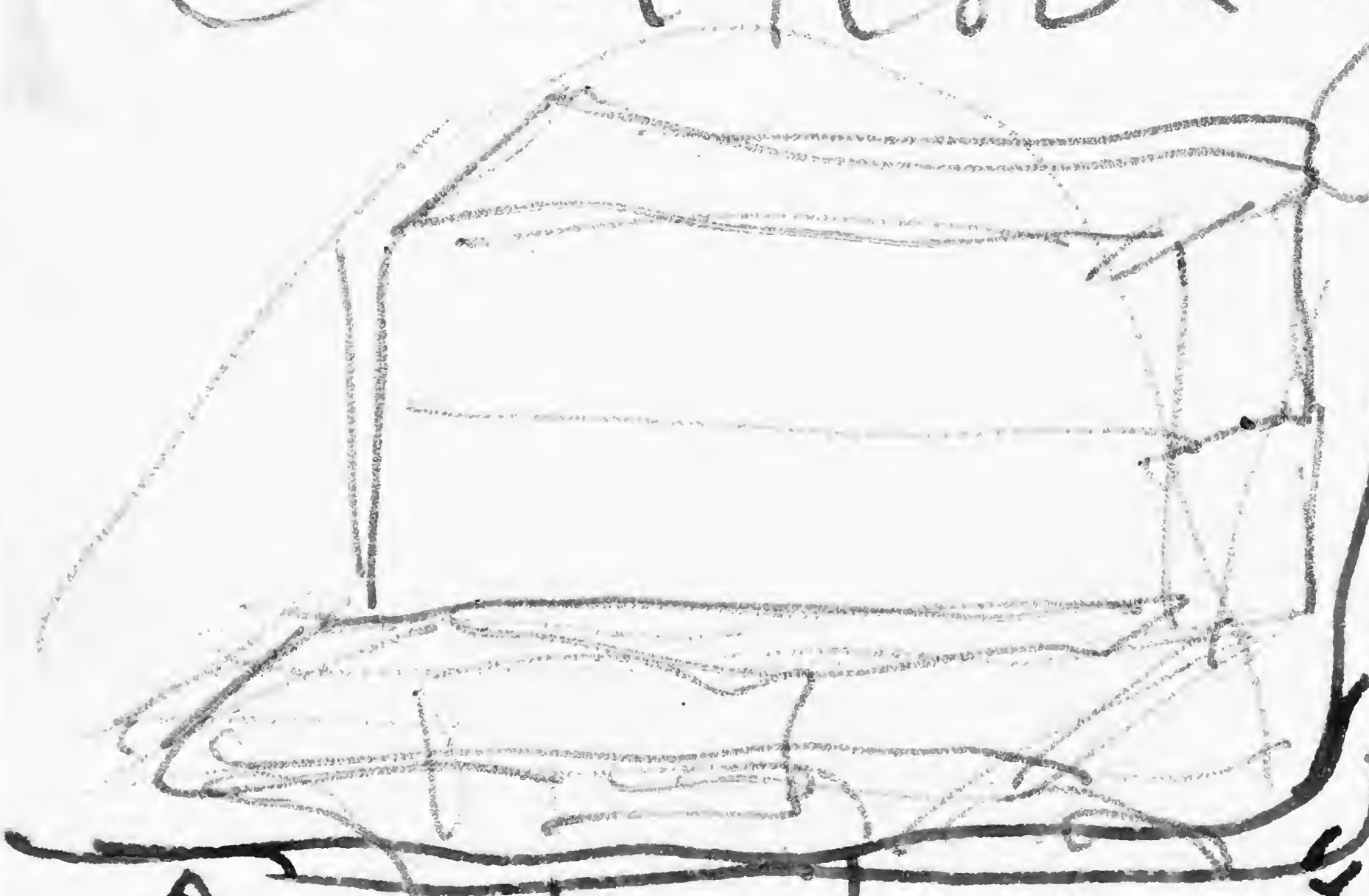
Feb. 5/63

on way to
 Spitzguth
 dir. r. s.

Feb 4/63

Sci. Dept
over haul
The ~~sci. dept~~ in hot-
d kinds of animals
collected. ~~over~~ haul
haul of traps collected
App but help it was 0
asked for a Dodge haul
very successful. Almost
lost behind rock.
Bour called SW 2:15
Mar 2:

Clear rock face



Feb. 3-63 to x
rockerries
you have
sites unlimited!

April showers in Feb.
If you are going to build on bird

Feb. 13/53
10 am left Chilean
Base for ^{amundsen} rookery

~~Had engine waste
del used gelatin, drug
in ~~base~~~~

~~11:32 returned to
let Leonard
pick up photo's~~

~~(at water bow Pt.~~

~~saw stranded L~~

which it took all after-
noon to free, after
all afternoon's work.

Penguins feeding on sea
weed (amphipods) to shore
^{diving} like ducks close
~~amphipods~~

Off Feb 3 = 63 -
at 9:05

We hear so much of
the dist. and occurrence
of animals but not much
long term project for
arctic Res. been pro-
cuted. — need vessel for
exp. and it shall proceed
rather than heater as
orphan ~~of~~ the other disci-
plines, which are only
working on the obvious
or the instrumentation
approachable problems

The exp. makes his
observations records the
knock off a heavy rock
and he is done

the history does
the same, but then
has to power or
drive (for mops)
his steamers, has
to handle gear etc.

The reason for going
stay with Leek.

children really up
place in boy's father
to go in Paradise etc.

yet uninitiated shall
not need many bits
to make an intimate study
Paradise Bay is only for
the birds — no
swell when into wild
weather

Jan 31 - 1963
Ber. 1958

860

British;
Base N.
Records.

were but unusually
cold winter with
a cold summer
in middle.

July + Aug 59+
av. were abn 00.59
F.

(-18°C-)

Lower than average
records being 1959
cold summer

Jan 28

11/5 Flight to
Pedersen Id.

A shore on Penguin
Id. gentoo's and
some Adelia I was
old man

back by 11/45

Pleneau Id
by Ima

Jan. 28? 1963
Pleneau Id off
Hovgaard Id III

Hand

written

—

Jan 24th - afternoon

left ship at 1⁰⁰
ret'd at 2:30
dine parties &
transferred some
party to other
side of inlet
quieted area is
very short & cut
it handling out
boat site is not
wise

Do roughly do pick
Traps by her out
Inside inlet crushed
trap took on home.

1 october per hatch
2 " volume to
wedged one, but
both shue per
frag. 4 order
had to ship. c
she 1/2 ashore.

Ice per
Dug as
by landing 10-11²⁰ am
though remain
few would desert
now to D.M. since
north 1/2

Jan 23^d Wednesd 63
Away at 8:45

Thought I could take
next day but
wind scuttled
High winds must be
frequent wind
scuttles of temp
important sign

Wind blow ice
only one advantage
Bad to ship at
11:30 but low
time fix radio
fish caught in bd.

Branches - Jan. 23/63
vegetative, roots
filled
with in large
tube

Sanapan Point

Shihua
we worried about
us yesterday with
wind getting up +
radio not working

Jan. 22 up at 5:30

to A.K. School for 6:15

fish 6-9 in the
Penguins activities, &
chasing after them

21st would not
let fish come
any more till

partly notice
which never
came

Jan 20

Other OK

Term column

Don't know how
on far side ^{desert}

Benjamin work

for Benjamin
seats about

3-4 Whales
sharks; terms
arrangements

perhaps dozen
isolated seats

Saturday, Jan 12, 1963

11:30 am Emperor, at the
on ice cake

12 noon sooty Albat.

on cake sitting, regurgitated two big blobs of food to take off barely got away before bow headed str at him.

Jet-tissmed lead
Sooty missed by bow
barely missed by

Star off

Can't stand on bridge or few birds but.

Yesterday snow petrels

Capt. saw seal & shear penguins or penguin

8 p.m. yesterday crossed Antarctic Circle headed S.

Snow petrel at 12:26
before & across bar
(over)

Did I also see a
Wilson's Storm petrel
certainly what I took to
be upper side looked
like 17 or 18 on p19 of Alex.
but what does 12 (Wilson's look
like from below.

11-I-63 00.04

steaming -

Manoeuvring to avoid
icebergs + bergy bits

0504 sighted ice pads

08-12 Man. avoid icebergs

16-18 } scattered icebergs
18-20 }

12-I-63 13 knots base
speed

ice coverage to 6/10

16-18 " " 8/10

ice floes to 8' thick

20, 24 visibility to 1 mile

13-I-63 broken ice pads

12-16 manning in circle
around a medium tabular
iceberg for pictures

16-18 ice pads over

7/10 thickness to 8-12 (m)

16-18 ice cutting
~~over~~ decreased to 5/
increased to 9/10
1820 Left ice pack

Boonahuan from
ice chips to 2 PM
Don't mind
no chance on
me

for morning
because of Boonahuan
anger. Let
on boat with Boonahuan
hind work eye 7
for 4 mo
can ride

~~6:00~~ am Mon ~~(11th)~~ Friday

Field of brash

ice few small icebergs

Smooth sea - snow petrels

Arched berg after lunch.

much arched one later

found to be an dock +

below at same time. The
Continual putting on + taking
off nuisance.

Fish + oyster stew today.
For lunch
- lemon cream pie. -

missed out bulk of
clothes over slept

Went up to ice first

+ so missed breakfast

P. W. Arthur Feb 5

63

Drum ansties

Versus Logistics

Mar 1

Toward Bragla Bay
Shay colony str
bd side head in

hook. Neumayer
Channel

lot of penguin
swimming in

channel

low melt, would
show

Jan. 5/63
10 a.m.

Wind Direct. 059
Force 15

Visibility 10 miles
Weather ovc. (overcast)
Barom. 30.11
Temp. Dry. 59
Wet 57
Clouds, amt 10
Height 1500
Type S.C.
Water. 50.9
waves 090°
Dir, W 1-2°

LEADER - BRENDON LYNCH

WIRELESS OPERATOR - LEWIS

METEOROLOGISTS (H.D.) ASHWORTH

Deception Id ~~Id~~ A. BOTTOMLEY

at Chilean Base G. KYTE.

DIESEL MECHANIC - J. TAIT

Sheath-bills only resident bird

No fishing allowed at
jetty
Traps for Ruro

Flights by arrangement

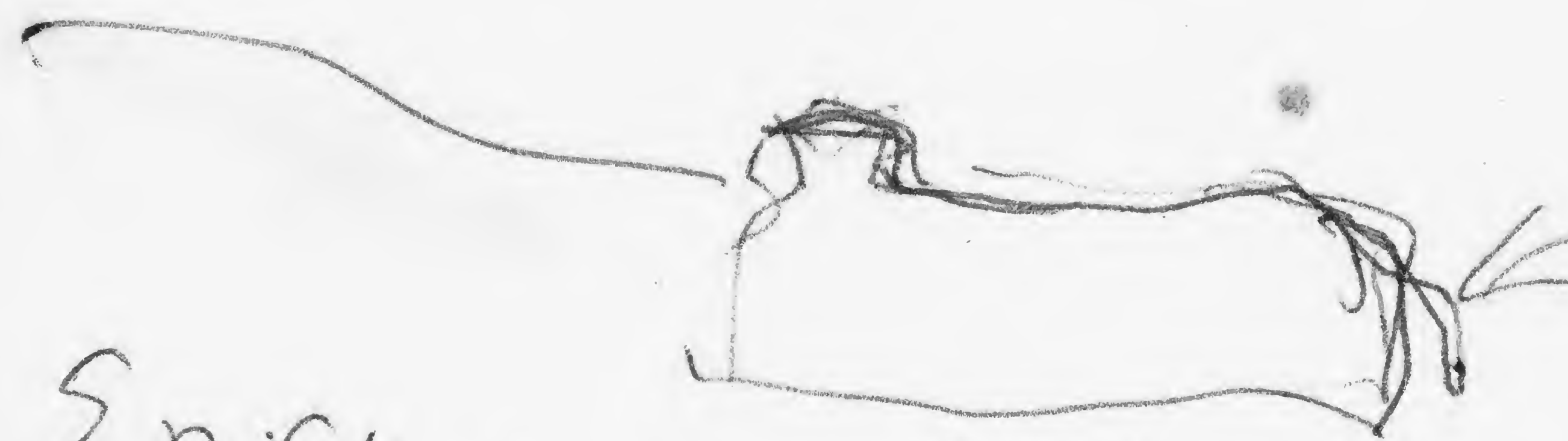
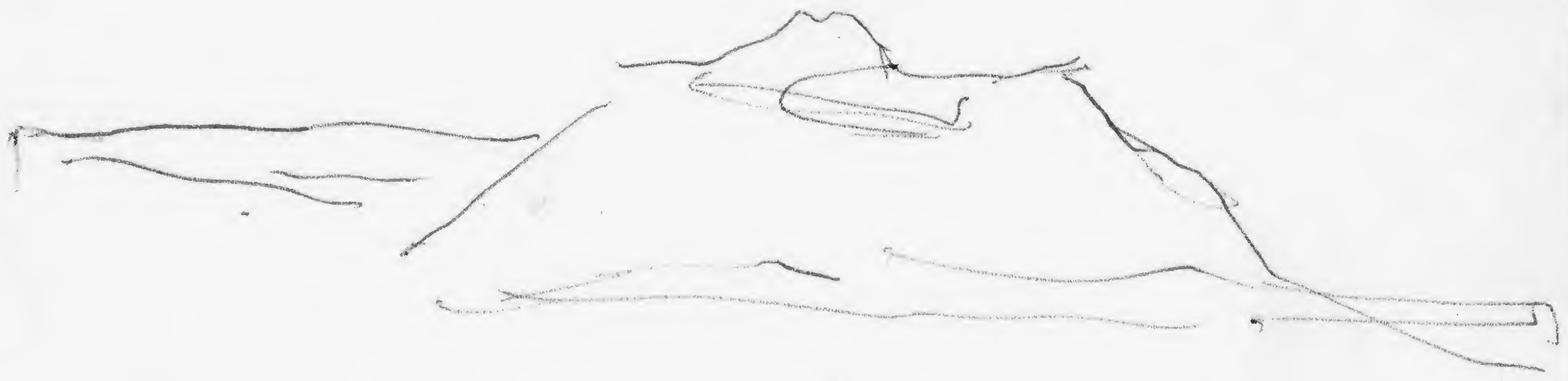
Trips to Right bank

Excluded lights

Low level

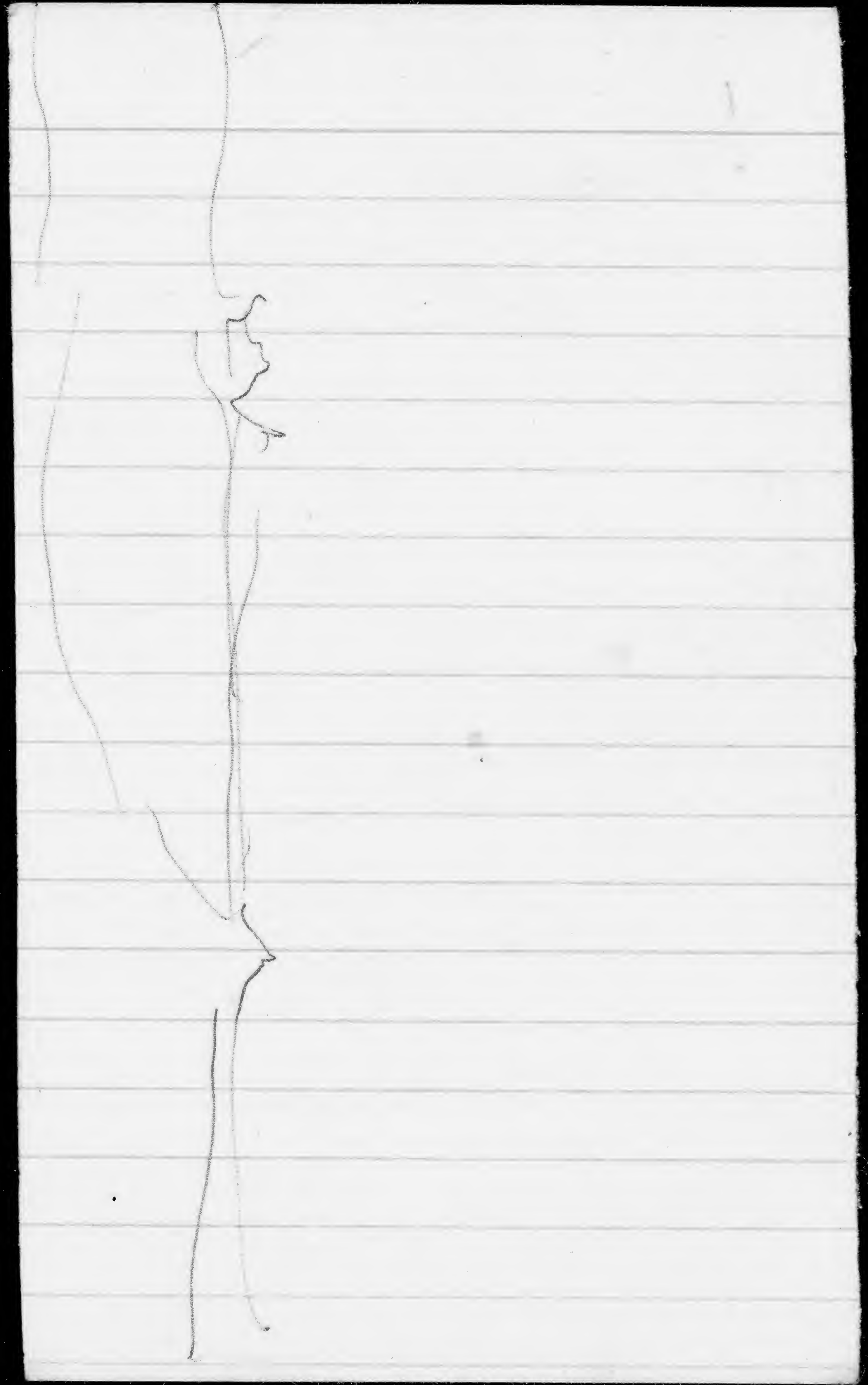
1 which includes ^{not} what
factor

2 Seal Pile 3 Huts



limb rump
has neck but
no head

Spray up 75
see 10 above the 64 mark



Evend Foyh ^{P. 194} ¹⁹²¹

Fine weather

is reported to

prevail, but

rather easterly

winds are

noted at times

C.F. Kyte Birds
Falklands; + Galindez

64/22/5

57 00 W

~~Snow Hill~~

Seymour

Gross

Valley

~~Fis of B, A, S~~

Ice free id
sea has ice

Ice covered id
sea free

Argentina
~~at~~ ice breaks
rozen in 10 days
last year
Paradise Bay 1919?

When

~~1919~~

Chin straps &
Shugs

DUTHIER PT.

Anward Bay

March 1 - 1963

Station



Station



Black Padlet
Seal

Warm/Amant/
lot of birds in ice about station
High tide very little from shore / see table

I should like to state here now
in back of state have rock
to top most cglm too scattered



2. Shingun track over sand
at base of hill

Feb 20
Y S I Tele Hermon

In these "modern" days
of instrumentation it pays
and is impressive to
carry some instruments
for radiuwhin, carbon
measurements, thermometers
& what not. Biologists
are just trackers in mess
and dirt. A couple
of men to carry them

Cape pigeons today
not seen at Seymour

Dominican gulls
show several
Andarcho Tern
seen in numbers
or if no nesting sites
nesting here only 150

~~Handicaps~~
Good holding grad
is stiff sandy
mud and has
a limited forma

One dredge
was started
slowly fast
~~made a~~
stake

Tow net hauls

Lost trap.

All the naked eyes at least were disappointed in this

T-1	Marquerite Bay	Jan 18
2	Bonapart Inlet	Jan 24
3	Arthur Abr.	Jan 25
4	Port Lockroy	Jan 26
5	Pederman Id.	_____
6	Galindez Id.	Jan. 29
7		Jan 31
8	Paradise Bay	Feb 1
9	Bryde Id.	Feb 2
10	Paradise Bay	Feb 4
11	Danco Id	Feb 5
12	Melchior.	6
13	Sven Foyn Abr.	9 (2 krill)
14	Whalers Bay	Feb. 12
15	" "	Feb 13
16	Hope Bay	Feb 14 (Salps)
17	Welchness	Feb. 20
18	Atcock Id	Feb. 23
19	Discovery Bay	Feb 26
20	False Bay	Feb 25

Lemaire Channel
On the way to the ~~next~~ ^{to next} area
of ~~Investigation~~, the
Argentine and nearby
islands the Staten Island
~~passed~~ through the Le
maire Channel. The
night of January 27
was spent drifting about
in ~~the~~ ^{the} scenically breath
taking ~~stretch~~ area
where the mountains are
as impressive, ~~and~~ indeed
~~beautiful~~ as fantastic ~~and~~ beautiful
~~in~~ in form and shape
as many of the great
~~sculptured~~ beautifully
~~colored~~ sculptured ~~icebergs~~
we had so far encountered

From Port Lockroy ^{the Souten} ~~we Id.~~
~~stea~~ proceeding south
On our way to the next area
~~From~~ The Souten Island
travelled southward ~~by~~
~~way of~~ ~~toward~~ on our
way to

on his journey about
Antarctica for McMurdo
to Marguerite Bay -
Alebaide Island and
strait. To Arthur
Harbor and Port Lockroy

The night of January
27 and ~~Monday~~ ^{the Monday morning of}
Jan 28th the ship ~~lay~~ ^{lay for} drifted
about in ~~the~~ ^{the} absolutely
placid water of his
There was no anchoring
here - virtually no need to -
tie (in 242 fms of water
virtually no need to in
near-~~absolutely~~ placid
water. ~~Giving as it were~~

~~and giving as it were~~
added stature.

Enhancing many fold
the beauty of our surroundings
with the crystal clear
reflections of the mountains
~~with their feet~~ rising from
the waters edge to these
peaks ~~intermittently~~
clothed with cloud.
dotted with caps of
clouds ~~from time to~~
time so that one could
~~discern their full length~~
~~portraits~~ photograph
them at full stature

A few moments to 1000 in
the morning Capt. Metschler
~~gave gave~~ the opportunity
~~was afforded~~ to the
Genbo
penguin rookery on Pleneau
Id. After luncheon
a helicopter flight ^{made possible} ~~at~~ afforded
a birds eye view of the
Argentine Islands, particularly
Pedermann Island +
~~the refugio~~ ~~at~~ ~~that~~
~~had~~ and the harbor
where Charcot ~~was~~ ~~the~~
Porquia Pas spent the
winter of 1902, the English
Bay, on Galindez Id.
with the supply ship Shackleton
moored stern to

Brialmont Cove Feb. 9, 10, 11 (1)
+ Feb 23, 24

Bird haven, all who have viewed the area from sea or air are impressed by the number of rookeries and birds thereon. Birds in flight were surprisingly limited in number excepting Wilson's petrel.

Three little fellows who have excited the sympathetic interest of the whalers company. All have talked of, and asked about ^{the ability} of these little birds to stand on their feet ^{the water} Jack says their feet are constantly in motion, treading water together and besides ~~there~~ certainly is some wing motion the while.

Also the skuas. One sees two or three, flying by with no particular interest in much of any thing, on their way ^{from} ~~to~~ ^{to} ~~the~~ ^{the} ~~you~~ ^{you} ~~and~~ ^{and} but let the garbage be dropped and the avian wireless

three penguins
ever saw in my life (Mac)
Gaipe Buller (Mac) Bisseseer
Chin shags
dark

seems instantly to alert a host of ⁽²⁾
the rapacious jaegers. 30 or more
appear well nigh instantaneously ~~at~~
~~it~~ it seems.

Though I saw but a dozen
to 20 seals on isolated cakes
of ice from 20 to 30 or 40 feet
across, mostly on the smaller one,
a single seal, only once two on the
same large cake while we were
cruising about, Capt. Mac said
in the Cove, ~~and~~ round about on
the ice he would say there were
at least a hundred. Could
well be. Crab eaters they were,
as it developed in the case of the
one we killed for Capt's mess and
bait. I have yet to see a leop-
pard seal, though Capt Mac says
that he saw a ^{considerable} number between
Salveson Bay and here. I am
yet to be convinced. Anyway
this 8 foot male when opened up

③

and stomach contents examined had nothing, but Euphausiids in his stomach, close to 3 gallons in all judging from mass as compared with my gallon jug of formaldehyde.

The stomach seemed to be in two bulges (sacs) a large (forward or aft one) full of whitish (as partially acted upon Euphausia superba by digestive ^{juices}) = $\frac{2}{3}$ of total quantity, and the small section with intensely reddish smaller species for most part even more digested than the former so I take it to be hinder end of stomach. Wish I had a scope & books needed To me it is inconceivable that an animal with relatively so small a mouth can harvest so great ~~and~~ mass of shrimp. Certainly they do not bird like gather them ~~to~~ kill in piece-meal one or few at a time. To me it seems that the krill are in dense schools or masses as crowded as sardines in a can. So far the seal it is like taking

a bite out of a stiff "cake" of ^{cooked} oat meal (mush). I am so ^{to} spots corroborated by the ship's observations made while I was down below on morning of 9th, when ship passed through several reddish areas, shoals of fish or something that reddened considerable areas of water between the ice floes and bird. As I remarked, I wish I'd known I would have asked the Captain (Metze) to stop the ship for a look see or hoped next time that I would be called.

Marguerite Bay ^{rocky area}
^{good base for}
^{area} ~~would be~~ ^{hilly}
^{in early}
much ice, making down
netting difficult. Which
~~is not to~~
~~be recommended~~

~~Avian~~ Avian Island despite
its seeming bird life, f.w.
pools, mosses and lichens

not favored as a station
site ^{as there} ~~is~~ ~~no~~ ~~ice~~
~~is usually here~~ ~~is~~ ~~usually~~ ~~here~~ ~~is~~

is usually much ice in
Bay, ^{Even so we were steaming on 18th}
^{morning} ^{through ice} ^{field} ^{and} ^{could} ^{see}
and according to ^{could} ^{see}

various pilots not ordinarily
open until late February
Ship had to shift position
to avoid sizeable ice berg

H.O.P. 189 (4-74) in early Feb. Marguerite Bay
still filled with ice.

Good buildings — one man
weather shack was about
ideal as study laboratory. 3
? — Favor some such arrangement.

1
Rothera Point, as a building
site, open ground, acreage,
foundation wise

Skuas dived at Lt. Thomas
so determinedly that he
gave up idea of walking around
shore of the Rothera Point
peninsula. He also saw ^{what} ~~evidence~~
~~looked~~ like a penguin rookery
but empty of birds. ^{rough} ~~scattered~~
handful area bet.
rocky ^{at} heights of point, ~~and~~ ^{to} left
of landing and ice sheet to
right.

I wonder to what extent
it is a draw and windswept

~~perhaps 20-40 in all~~
we saw 2+3 ^{here and there} scattered in small
bergs and ice cakes

in similar situations at Avian ^{island}

Jack found a whole layer Feb. 20 / 63
Cape Welchness, ^{er of} good birds

Literally immense acres

For building ^{can} equals McMurdo
also place for dry land
run was of varying length
however drainage needed
a number of watercourses
traverse the lower land.
actual gullies worn in
soil plant life is at a
minimum. scarcity of
mosses and lichens.

like Seymour would be
a paleontologist heaven

~~Penquins couple of dozen~~
24 to 30 penguins

check Nordask.
account of sci
work.

Birds

Found broken shell
old in net(?) little else
visible. Dredge =

few storm Petrel
handful, perhaps
2 dozen Dominicans
2 " terns
same 2 skuas
Cape Pigeons 2 dozen
or so

Eymour Id Feb 15/63

Material. Dredging as we have done is almost
less than random sampling of terraces or a
square miles. It is a bit of a mess but
is a bit better than a thousand?

Judging from the algae
picked up by Cande
Price Lewis and Mr
Crowell, the area must
be rich in marine life
despite the meager dredge
hauls, perhaps an
deck bucket full of sand
and rocks in two
drags by the side of
dredging (in the wind)
ship. As usual got
some ascidians of
unusual type, worms of
a different nature, and
young ophiurans, an
interested and willing
to "dig" biologist will
surely find a wealth of

Seymour I. In this
said to be an exceptionally
open year landing by
bow, is impossible.

Argentine Ice Breaker
last year was frozen
in (immovable) for 10
days in the ^{F?} midsummer
period; and in a bad
year, what would be
the situation ^{frequent} high
winds are ~~so~~ said
to ~~be~~ be customary
and that would prevent
sailing. Another
member quoting Lasser
remarks:

Paradise Harbor Feb. 1, 2, 3, 4 / 63

Check on speckled petrel; you had plumage?
were large chicks brownish-grey bills. In flight had black line over eye.

Adelies few said to be here by Chilean (at Paterna they said [up the Bay?])

Penguins most frequent

Chin straps first time in nos. ~~also~~ also at Dufferin Pt Cape?

Skuas

Sheath bills

Snow petrels about

Few Wilson's seen

Seabirds few in number

Mosses abundant and orange lichens conspicuous

How ever nesting sites for Birds limited: Terns by Argentinians

Amphipods ~~large red~~ most numerous

Sea weed near surface at Chilean sta. Penguins feeding on them?

Dredge hauls 2 = diving off shore

imagine find areas of this sort.



Chap. 4 (p. 140), ^{sect.} 4-4

H.O. (1)

Little Hbr inside Cape
Roquemaurel

small pools → carpet of sea
weeds

Also anchorage

(p. 141) 17 miles above Palmer Arch.
depths of 200 fms.

~~Gerlach St. 300-500 fms
deep.~~

~~Shoals to 100 fms. in wake
of Anvers Id.~~

~~Boat
to
depth~~
nearby is site of first
discovery of Antarctic
Cont by Palmer

Nov. 17, 1820. Semington Com.

(*) Submarine tunnel on east
side of Mikkelson Hbr.
(Hoseason Hbr.)

sect.

4-8

(p. 143)

1970
1820



Feb. 12, 13
Deception Id.

~~British are~~
~~classing~~
~~at~~ within

- ① Excellent building sites, drag
- ② Plenty of land ^{perhaps even birds}
- ③ Snow or melt water all plane had in sufficient quantity
- ④ Boat facilities relatively easy to install

50, + 250, + 40, + 200 close to
350,000

Chinstrap heaven } 2400,000
Finest study
great fish

Readily accessible ⁱⁿ ~~year~~
much of year by ship ^{fresh}
or sea ~~air~~ plane; also reasonable
air strip - being improved.

Marine work in hbr limited

~~Marine~~
But outside should be
incomparable beams
at depths
all joints

Deception Id

Alaska Barrow Id Id

Well at 65° indicative
of what could be done
by a bit of drilling
would probably solve
heating problem and
danger. This has not
inhibited Italians and
North New Zealanders for
installing tremendous
pump plants in volcanic
areas. Are they any
more stable than than
Deception Id. area?

Heception had 1930 eruption.

Should be outside Pack ice limit
Sea March.

Rules out Rope Bay
Seymour Snow Hill
+ Adelatea.

Narrowedown to Ruess Id
+ King George.

Under favorable conditions can see feathers in bottom

P. 201 Cascade for S.W. you winter Id / Admiralty Moss, peat
Argentine Ids } large nos of birds breed in these Ids
Lat 65° 15' S }
Long 64 16' W. } Meteorological S.W. cor. with

P. 201 line 37 "Some possess a peculiar luxuriance of vegetation which is the richest yet found in the whole of Antarctica."

On slopes with northerly aspect are patches of moss covering as much as an acre. Is a peat up to 3 feet in thickness

"This moss is frozen except for the few top inches in summer"

"The Ids are surrounded by reefs, but there are navigable channels between them." p. 201 line 44.

British Graham Land exped winter on S.E. end of Winter Id. Small thr in Stella Creek Large nos birds breed on these

Arthur Apr. 22-25				Sea			Wind	
Air Temp.	Max.	Min.	Av.	Max	Min	Av	Max	Dir
22	38.1	31.2	34.9	34	31	33	one gust	63
23	46.2	33.1	38.1	35	32	33		25
24	36.0	31.1	32.7	34	34	34		Av.
25	39.4	31.0	34	34-33	34			6-15

Temp for period

Birds: Adelies numerous
number of colonies in sight
from anchorage

Giant petrels Skuas.
common.

Cape Muroz area

Pomarine
Gulls.

3 Chin straps
seen near hut
at Base N
side ^{of} Malloy.

Shore call
small gastropod
marine algae thick
along shore

Very crushed trap
in Inlet.

disposed large ascidians

Rocky bottom at Base
Inlet. and muddy

Biologically Redden his
very rich area

Arthur Hbr. Jan. 22, 25 / 63

Bonaparte Point Inlet.

Large ^{clump of} ascidian leaved
sea weed, algae large red
and filamentous
profusion of lichens
moss patches

large clump of
ascidians small
mollusks

promise of
rich fauna

much of within dip
net reach

handy list
rec'd Feb. 26 / 1963
Berg promised me
list of birds
from outlying Is.
(Jack says many colonies)

rocky ~~bottom~~

seal hauling
ground

Giant petrel

Arthur Hbr. general = Skuas, terns
= Wilson Petrel

Adelie penguins.
3 Chis strap. (Thomas saw one)
Cormorants (shags)

Mallard
swan

Whales seen occasionally

Biscoe Bay to east of Arthur
Hbr. a penguin rookery

(2)

A number of other birds are to be found here too. There are Cape Pigeons around most of the year except between August 11 and September 8; common also, is the Dominican gull, which here in contrast to its habits in the Argentine Islands is ^a non-resident ^{at} Deception Island.

Why? Could it be that the gulls at Galindez get enough dog food or scrap ~~but~~ ^{at} the station here to make wintering over possible?

Adelies / Head normally without any white markings except for the conspicuous white eyelids, the effect of which is enhanced in life by exposure of a large area of gleaming white cornea.

Seals of the Far South (E. G. Turbott)

Weddell Seal heavy build, up to 9 ft.

dark grey almost black, with handsome mottling of white and silver grey on the underparts. By annual moult in late summer its colour has faded to a rusty grey. Stout + Sluggish

Food fish + squid.

Pupping in Graham Land = 3 wk. Sept.

Young eat crustaceans before suckling is over + for few months after weaning then goes on to fish + squid.

Crab-eater seal smaller than Weddell up to 8 ft.

Moult results in ^{fresh moult having previously} yellowish + later white

coat (White Antarctic Seal) Upon moult crab-eaters are a rich grey-brown

with irregular pale blotches on sides and lower back, giving it a handsome dappled effect. At stage of greatest bleaching, is about white.

Eats euphausiids, strains out with cheek teeth as sieve; occasionally eats small fish.

Ross Seal only 50 have been seen

Food chiefly cuttle fish + squid, more rarely crustaceans + fish.

Has swollen blubbery neck, into which head almost disappears when withdrawn.

Reaches 9 ft. Is greyish-brown or black above + paler below, with distinctive pattern

Head + snout pig-like

of oblique pale streaks on the sides

Sailing directions, and illustrate deck
cf. whale pictures

Leopard seal up to 12 feet.

Long snake-like body with large head
Post canines 5 on either side
are powerful 3-lobed tridents.

Solitary in habits.

Skin dark grey which blends into black
towards tail. On flanks and shoulders
it is mottled black and silver
Feeds on penguins, and other seals.

Crab-eating seal up to 9 feet

Small head and short thin neck
skin yellowish-white, or mottled with
brown and silver

Fix > Canine teeth well developed
Gregarious Feeds on krill

Weddell seal up to 10 ft.

Coat is black, brown, and
silver grey, the back being
darker than the under surface
Canines of ~~the~~ worn from dig-
ging holes in ^{the} ice; incisors recurved
and hook like
Avoids pack ice; usually found
on fast ice along the coast in
large numbers during the
summer months, Feed on fish
and squid

(Admiralty)

Weddell seal most southerly
ranging of all mammals, and
Crab-eater seals are tolerably
plentiful in parts of Graham
land. Former in most parts
of peninsula and islands
latter an inhabitant of pack
ice, Leopard seal less fre-
quently seen

(Admiralty)

Leopard Seal. Diet is fish & cephalopods, but bulk is obtained by preying on other seals and especially seabirds. Most important food probably penguins. When bird is killed, is brought to surface and so vigorously shaken that it is, at least partially, skinned. Also feeds on dead carcasses of dead whales & seals. Has killed 3 adult seals of other species.

Colour dark grey, shading to paler grey below; neck and flanks are distinctly splashed and spotted with silver and black. Immature animals are more silvery grey than adults.

Antarctica 5 1/2 million sq. miles; ice 10,000 feet high

Antarctica, Today and Tomorrow
by G. C. L. Bertram; Univ. Otago,
Dunedin, 1957

Admiralty.

The humpback when diving
throws its flukes out of the
water like the sperm and
right whales

Shape of dorsal fin is the
best guide

Fin whale is most common.

Miller Richard Gordon, N.Z. Journ Sci. Vol. 4

6 species Trema Dumus

No. 3

1961

pp. 664-

68

1

Notopenia

- A. 3-4 meters depth. blasted hole
B. 6-8 " melt hole.
C. 1 " ice foot
C₁ similar to C.
D. 6-15 " close off shore.

B produced all seven species.

28 species ident by author = 4 families

Notopeniidae

Harpagiferidae

Bathypagionidae

Chaenichthyidae

} greater part
of Notopeniiform
group of the
Percoidae

Zoarcoidea

Muraenolepidae; 4 species

See Regan British Antarctic
(Terra Nova) Exped. Rep.
Zool. I (1): 1-54 ~~pp~~ 1914.

Waite, F.R. Fishes.

Sci. Repts Australas. Antarct.
Exped. ser. C. 3(1): 1-92

"I can imagine no more productive means of coastal exploration in Antarctica than to give such a ship a free hand for the whole summer season. A voyage in an icebreaker is certainly a stimulating affair."

Algleish, David Geoffrey
"Emperor penguins"
Rookeries observed by author
at Marguerite Bay, Grahamland
1948 and on Caird Coast, 1956.
Sea Swallow Vol. 10, 1957, p. 18-19.

Feb. '59 1 million pounds handed over. at
Wilkes Land.

Staten Id. If she, or a sister
ship, were freed from ordinary
logistic duty, fitted with a labora-
tory and a complement of scien-
tists (as Staten Id. indeed was)
and let loose along the less accessible
Antarctic coasts from Oct to April,
with launch & helicopter as auxi-
iliary aids, she could do more
valuable work in that time than
any static wintering party
could accomplish in a whole year.

Sir Raymond Priestley in The
Polar Record, Vol. 10, No. 64,
January 1960, p. ~~14~~ 15.
"Antarctic Exploration Yesterday
and Today"
1908 to 1958 (Doc Freeze IV)

British Graham Land Exped 1934-37
Marguerite Bay | Southern Base on
Barry Island

G. Land south side Drake Strait, directly S of
Cape Horn. G.L. has left practically ^{undiscovered} unex-
plored, mainly because of difficulty caused by
heavy pack-ice in reaching coast by ship.
(See Filchner 1912)

North of 65° Coast is readily accessible
well known to sealers & whalers for many years

Only 2 ships have penetrated inside Biscoe Ids.
Charcot "Pourquoi Pas?" 1908

Discovery II, in 1931.

Port Lockroy is a harbor discovered by
Charcot 1904

No place on mainland for a base; coast fringed
with narrow belt of glaciers - ice wall 60-120
feet high unbroken for mile after mile.

Found a good place on Argentine Ids (named by Dr. Charcot) 40 miles south of Port
Lockroy, and within 300 yds of place
which we chose for our base site, there was
a sheltered cove making an excellent
harbor for the Penola. (2 storey Bldg.) ^{22x} 15 1/2 ft.
(90 seals killed & stored in ice cave for winter)

Geogr. Journal Vol. 91 No. 4, Apr. 1938
Brit. Graham Ld. Exped. 1934-37. May 1930
J. R. Rymill (before Soc.)
Nov. 4, 1937.

" " " " " "
Antarctica News bulletin pub. by
New Zealand Antarctic Soc.

Vol. 3, No. 2 June 1962 Art. by Bernard Stonehouse
Colonies of Adelie on Graham Land

Cape Royds colony most southerly

Scotts Fresh water pools among the cinder slopes.
"many instructive samples of invertebrate life"

p. 57 1963 will study primitive plant life at Cape Adare

p. 58 → Univ. Canterbury Cape Crozier plankton
& sea bottom sampling.
Erebus 12,450 (u.s.) Ross had (1851) 12,400 feet.

p. 60 '63 Plans vs. E.A. McDonald. 70 lb. meteorite

p. 82 Brit. Antarctic Survey =

Port Lockroy closed down after 18 yrs.
Wiencke Id.

Moulded plastic non-magnetic huts
(30 ft. snow over old huts)
connected by tunnels.

Graham Land (Stonington Id - Fossil Bliss)

Dion Id. only 4th rookery Emperor
Penguins then known discovered in 1948

Vol. 3, No. 1 Permanent Biol. Station at Cape Royds
Soc Univ. Canterbury

p. 458 Penguins sleeping with toes raised (photo)
Feb. 12, 61 rescued 4 men McDonald. (east coast)

Vol. 2, No. 8 Argentine excursion. Dec. 1960.

p. 329

Vol. 2 No. 7 p. 270. Seals (Crab eater, Lobodon carcinophages)
Gaemre Caughley in Taylor Bay Valley, natural dispersal

See. W.F. Blair 1950 Evolution 4, 253-75 1934-37 Sci. Rep
Bertram, G.C.L. Biol. Seals Br. Graham Land, Exped
Sect. N. Z. Ant. Soc. P.O. Box 2110 Wellington.
+ Pove Science 130 (3377:716) [1:1-39]

The Antarctic Problem by
E. W. Hunter Christie (An Historical
and Political Study) London
Geo Allen & Unwin Ltd, Ruskin
House Museum Street, 1951

(Argentine Ids. (40 miles south of Pt. Lockroy)
Lockroy was not considered suitable
second Base put on Barry Id.

Q. 234 ^{fnote}

An example of the inutility of aircraft alone,
is to be found in ~~the~~ "Operation High-jump",
Admiral Byrd's latest Antarctic expedition.
Literally, thousands of aerial photographs
were taken, but it is said that owing to
the absence of ground control, no one
knows what they depict.

(Q. 236) ^{East Base}
The hurried evacuation of the base meant
that valuable equipment, including the scientific
specimens and most of the men's personal lug-
gage, had to be left behind... (dogs were shot)
Much of the equipment and the scientific specimens
were later ^{pp 237} removed by the Argentine naval trans-
port 1° de Mayo and by Chilean warships, what
remained was put in order and carefully stored
by a British expedition which arrived in 1945

and was afterwards used ~~by~~^{when} Finn Ronne
led his own expedition to the Antarctic
in 1947. Some of the scientific collec-
tions were later recovered from the
Museo de Ciencias Naturales at
Buenos Aires, and have now reached
the United States.

p. 24¹ Commander Finn Ronne's expedition
was successfully relieved during the
summer by two ice breakers, units
of a United States Naval Task Force
engaged in "Operation Windmill", the
greater part of whose activities were
concerned on the west side of the
Continent.

p. 25⁶ Ronne cooperated with English
+ ^{they} worked together, "thus achieving
more than either could have done
independently. (Base E where
Port of Boaument
was lying ^{Texas})

Antarctica Vol. 2 No. 6, June 1960

E.C. Youngs art. p. 225 on Cape Royds ^{Mount}
p. 170 Av. snowfall in Antarctica 5 inches a year

^{Sept. 1959}
Vol. 2 No 3. Khar'kovchuk tractors
Russian. 30 ft. long 13 wide
12 cylinder Diesel, 28 miles per
hour.

Lichen forest.

p. 107. ^B 2,000 N.S.F. McMurdo Biol. Sta.

Hjalmar, Broch. Benthonic Problems in
Antarctic & Arctic Waters

Sci. Results of the Norwegian Antarctic
Expeditions 1927-28. Vol. 3. No. 38,
1961, 32 p. [Det Norske Videnskaps-
Akademi i Oslo

Richard Gordon,
Miller, N. 2. Journ. Science. (in Polar
Record
Vol. 11 No. 71
May 62

Neotomid fishes from Cape
Bulletin Ross Sea.

~~N. 2~~. Vol. 4 No. 3, 1961, p. 664-68
Syst. List 7 fishes.

Nature: Vol. 188, No. 4752, 1960

Microbiology of some soils from
Eliz. Flint + J.D. Stout Antarctica

Photos Antarctic Sea Bottom | Also Nature
Vol. 184, 1959
p. 422-23
J.S. Ballivan. Polar Record Vol. 10 No.
68, May 61.

Filter feeders - deep level shelf in
Ross Sea. at 200-300 fms.

L. E. Richdale, A population study
of Penguins, Oxford, Clarendon
Press 1957. [The surveys of ^{the} spp. of
penguins under North]

do Sexual Behaviour in Penguins
Univ. Kansas Press, 1951

It is an absolute necessity that one should
become familiar, or perhaps better, intimate
with an organism, so that he knows it in some
what the same way that he knows a person, be-
fore he can hope to get even an approxima-
tion of the truth regarding its behaviour.
(Pearl in Russell, 1938:17).

E. S. Russell. 1938. The behaviour of animals.
Arnold, London 2nd edit.

Southern Lights. The official Report
of the British Graham Land Expedition.
1934-1937 John Rymil

The Travel Book Club, 111 Charing Cross
London, W.C. 2, 1939 edit.

The Antarctic Today. A midcentury
survey by the N. 2. Antarctic Soc.
edit by Frank A. Simpson.

A. H. + A. W. Reed in conjunction with the
N. 2. A. Soc. 1952.

Argentina Geol. Juan Oberha,
 2 Camacho
 3 Bordone
 4 Geol. Botto corr
 1960

Barth, Antark Survey
 1 Fossil Benji Stephan
 2 Upper cretaceo Graham Land
 3 Penetration of Graham Land
 4 " " "
 5 " " "
 6 Ammonites of Graham Land
 7 Geol. South Shetlands
 King George Id
 8 " " Skapten Id
 9 Anders Id Geol

Chile Juan Braccini
 Antofagasta

SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON 25, D. C.

Whalers Bay

Feb. 12, 13.

Deception Id.

This place has most everything building sites with plenty of ^{upland} flat land water melt water streams and built in available source of heat, that could be tapped, I believe, and perhaps without too much difficulty. ^{steam power} There is a well of 65° F water ^{at hand}.

Also small boat facilities could easily be installed, likewise air ~~facilities~~ ^{be or} strips.

Insert from p. 2

From about the ~~site~~ ^{summit} whaling station ^{here}.

Regrettably ~~our stay~~ ^{was due to the Navy's desire} In our brief stay here a little shore collecting was accomplished; Mosses were gathered and Berlosed, ^{but} ^(or) Due to the Navy's being seemingly in haste to get to Yankee Harbor, a dredge haul was not consummated. ~~Marine work~~ Dredging within the Harbor probably would be difficult because of wreckage, bones and misc. trash ~~and~~ and iron junk littering the bottom. For the whaling days littering the bottom. But surely in the vicinity and probably else

but we did not get at the rich
lichen thicket on the far side of
the entrance to ~~the~~ the Port.

Where within Port Foster there is much in the way of marine life to be had, if the fish trap returns mean anything.

Thirty five five were found in the traps when lifted on the morning of the 13th Feb ranging from 11 to 21 inch in length, the greater number ~~was~~ 17 were 13" in length and 7 ~~blunders~~ above 16 inches in length

Insert in p. 1

If any one wishes to ^{live with and make an intimate} study of Chin strap penguins I should say that this is the place. I believe there seems to be ample ^{space might be found} room in the British Base ^{and highly attractive} here which has a sleeping home like ^{residents} ~~accommodation for~~ 14 but a ~~staff~~ ~~for~~ well short of that number, so that an applicant observers, or guest researcher could probably be taken care in with out ~~any~~ difficulty.

There must be ^{are in excess of} close to 300,000 chin strap penguins ^{on this small island crater rim} here, by both British and Chilean estimates, of which better than

~~99%~~
 98% are chinstraps mostly living on the outer rim of the crater, a few small chinstrap colonies have settled on the inner rim. ~~Perhaps~~ ^{about} 1% of the penguins here are gentoos and there are also a few macarries and ~~Adelies~~ ^{about}

What ~~is~~ ^{is} picturesquely described as during parties of Gentoos. ~~Adelies~~ single or unattached Adelies may accompany the ~~Gen~~ ^{among} the Gentoos tourists. single Adelies have been noted. ~~A few~~ ^{a small colony of} macarries penguins have been is located on the outer side of the N. ~~shore~~ outer slope of the crater.

~~As regards laboratory facilities, and living quarters~~
~~referred to~~ Aside from the British Base but there are some very large, rusty iron or steel tubs ~~down~~ ^{near} by the shore by the old whaling station one or two have had doorways cut into them and are used by the British as store house

Other birds are not nesting: There are numerous Cape Pigeon but these here most of the year except between August 11, ~~at~~ Sept. 8; ^{through} the Dominican gull is common but not resident, but here are blue eyed shags, snow petrels, ^{shearwaters} ~~skuas~~ & Wilson's ^{skua} petrels to be seen all times and blue eyed shags, and swallow-tailed (or Antarctic) terns, to be seen most of the time listed in ^{late} 1962 Falkland Islands Dependencies Scientific reports available at Base B.

The Giant Petrel is about the year round.

There are several unused ones that could readily be converted in to residence and laboratory facilities by ~~cork~~ cutting doors + ports, corking lining them (as is the Staten Island) and putting in a couple of floors. They are close to sea water, and melt water steams, as well as the ~~steaming sand~~ ^{beach} ~~covered~~ covered at ~~low~~ ^{high} tide from which clouds of steam arise ~~at low~~ when uncovered at low tide. ~~Good~~ ~~measurements~~ could be installed for

Stemmic

30 XII.62

Dear Drs Ra go tz kie and Linkens Greetings!

It's a bit late to wish you a Happy New Year but the thought goes out to you both. I did not get the chance to see you again at the Lakes as I had hoped because after the "fire" all flights were cancelled. I hope you did get back to Base for Christmas.

There is one question I wished to ask of you folks, especially in the light of your experience with well equipped biological laboratories carrying on as varied lines of research as are being supported at McMurdo. Is there anything in the way of "heavy" or permanent equipment yet needed - some that you missed or might have expected to find at McMurdo? I shall be asked to tell of my visit to McMurdo, even though

it was but incidental to the Palmer Peninsula trip. A suggestion in Washington might help Dr. Wohlschlag provide it for the investigators, or even yourselves, another year. Will you be "buttoning" up your lake studies this year? If not do go back again. I like the way you ^{do} are going ^{at} things, and certainly would appreciate a copy of the report you turn in to the Program office or may publish elsewhere.

Whatever you can suggest or recommend as to need laboratory "gear" or supplies I'd be happy to receive. You can ~~use~~ use the enclosed franked envelope for reply; it needs no postage if dropped into the McMurdo P.O. or any where in U.S. Territory.

Kindest regards to you both,
happy landings → all at home →

Sincerely,
Walter S. Schmitt

Possible or tentative allotment of remaining time	1 day's steaming	Feb
Brialmont Cove, Alcock Id	1 day	22
Charcot Bay	1	23
Huron Bay	1/2	24
Peninsula, rest of including Roquemare	1 1/2	25
King George Id	1 day's steaming	26
Admiralty Bay	1	27
King George Bay	1	28
Penguin Island	1	Mar. 1
Collins Harbor	1	2-
Potter Cove	1	3
Nelson Island	1	4

Euphausiids ——— From H.O. polar normally confined to zone south of 30° C isotherm

Distr. within zone not uniform

The concentration of krill in some longitudes and comparative scarcity in others is dependent upon the local hydrological conditions. Krill drifts passively with the currents as do the diatoms on which the Euphausiids feed.

12 ~~12~~ days, if you

spend 6 days at King George Island; still leaves

2 ~~2~~ for bad weather or what not.

Why would not distrib. of Crabs eater seeds coincide with distrib. of Krill?

Smooth copy of
this to Jack Feb. 20/63
evening

(A)

Lt. A. R. Nash Eng. Bar Yards + Dock
Below from letter to Tyrep ~~|||||~~ E. F. C. U. S. N.

Alternate sites in Lewtan Rept.
Future, ^{as} envisined 30 biologists.

Building program to cover 3 yrs.
6 biologist to winter over 1st yr.

||||| Facilities for female scientists
in second yr. ^{all more reason}
^{or Russian or Bahiri style for sep. rooms}
assembling building on side
pre fab buildings depend on
reach conditions

N.S.F. will provide all ^{equipment} ~~see~~
Flush toilets will be provided
Sea water conversion.

Sta to endure 15 years: re
location not contemplated

35-40 ft Launch, + 2-3 small
boats with out-bds to be hauled out.
Air support will be minimum like Fish B.
support of remote field parties not ^{contem} ~~plated~~

(B)

- Minimum of (for) acres
buildings 500 ft apart,

Type Sled mounted

" Prefabricated

end of notes on Type letter

What are desiderata - criteria

Things I would like to
pick up at McMurdo for
Edisto trip: (

3-4 fish traps, line, buoys
and weights (sinkers)

2 down nets

3-4 1lb bottles formalin


1 bottle (1lb) Hexamine
(used to neutralize formalin)

couple dozen vials

" doz. bottles for down net
samples and or bottom
samples

Geological hammer

Game bag or similar with
shoulder strap.

Are any ^{small} reach-type traps
about  for
small "things".

type fish traps
will be made up
for me
secretary phired in for them.

Tooth paste ←

~~Pants hanger~~

Scotty Paper ←

~~de Vergin~~
Cloth Paper

Thermometer ←

Detergent

Jan 1, 1963

Training Program for Scientists

Dec. 16

Time Mag?

The dedicated & the alert and curious about sci. & sci careers will get them anyway, but the opportunist & easy come easy go will get on the 4.7 billion band wagon so will the unin. how did they drain the Ph.Ds before Santa Claus (vote buying), Kennedy arrived on the scene?

service fuel easily ice, wind weather ^{# 3}
Leave of absence below

- ① Accessibility ^{by stair} landings, ^{by sea} water involves evacuation of sick or injured (dead?)
- ② Small boat shelter, and facilities for hauling out

③ Both foregoing involve ice conditions, wind and weather

④ Water supply, take if possible or possibility of creating one, involves presence of natural streams flowing in summer time, ^{etc.}

Pure and undisturbed salt water

⑤ Housing site, and room for expansion, ^{Variety of environment, shore + adjacent sea bottom}

⑥ Various marine environments within reasonably convenient reach, shoal as well as deep water. Varied bottom types sand mud, rock, algal (not too uniform as entire "bay" or harbor volcanic sand)

Organic life present
Marine
Terrestrial
Plant
Animal

⑦ Varied land environments, ^(cropkeries) animal colonies, lichen-growth, "swampy" areas, "dry" valley, ponds and or lakes
watch for opportunity to explore coast behind ^{weather sea}

Martin
Scott

Holdgate

Ship

Granted by the State for
the purpose of the
of the State of a series of
to get in course, well



copy
Character in
connect with
dominion

Pilot operation of
~~the~~ a vessel, at least
for a full summer
along the suggested
base line —

The specialist lined
up for the various ani-
mal groups ~~for the~~
El Punin ~~collecting~~ material
could work in this
undoubtedly lesser (in
bulk material) without
much trouble, ~~at~~ with
some encouragement in
the way of honoraria, this
should be a matter of
plain sailing. Crustacea
worms, and echinoderms
we can handle in Nat. Mus.
Also ~~if~~ El Punin group cannot.

My experience
at sea on
vessels of various
size and degree
inclined me towards
a floating laboratory

Floating Lab. experimental
vessel for freezing in freezing
a vessel would be it seems
~~subject~~ ^{subject} of investigation. What
do we know about physics
mechanics, ^{forces encountered} and construction of
is over wintering in Arctic and
Antarctic ice / What about pres-
sure ice.

Quote Sir Raymond Priestly. re
ice breaker, my hope would be
for an extension of same to
specially designed vessel.

Certainly, if after a time you want
to pick up and go you can

ber > Picture of Russian Ice Breaker sitting on ice
in some Navy Publication.

2 vessels (boats) drawler, + 30 footer
but with experienced ice navigators (captains)
New England, Maine, Nova Scotia, Labrador. ?
Burlett type

Dear Bob

In talking over our Palmer
land expectations with Tom Berg we
came to the conclusion that it might be
more behovee

In the almost 1/2 dollar and
change to ~~subsidize~~ students

Assistant on basis of
wrestling ~~has~~ reaches

~~high school~~

The best ~~get~~ ~~affiliated~~
independence of this. affiliated.

(and as does not become an
affair ~~in~~ head (of inbreeding)

Say what you want professor
not being profit by, and it
other than the own teaching
C. Why not an exchange of
affairs

▷ Take not stock in can't
get professors those who
want place (get rid of
students) are not particularly
interested in project perse.
(at least in summer) If
here would make it his per
endeavour.

Univ. should be agreeable
get overhead and prestige

Present system may result
in getting not best men because
^{any} applicant in field that should
be investigating gets grants
where better man might be
persuaded (for science sake)
to do job or (has for science
sake disappeared among Univ.
prof (not preeminently researchers))

Vessel of less draft.
could scout out
all areas visit and
land parties on
place which it was
not safe to approach
in so large a vessel
as the Staten Id.

Arthur Abr. Jan. 22 - 25th/63

Dean Charcot, besides being
a great gentleman, was a
great philosopher: he said
(realizing that it was an ad-
vantage that each man should
have a cabin or some such
place to shut himself in): "
It is often more difficult to
bear the daily pinpricks than
the great greets."

2nd paragraph, page 101,
in Admiral Lor Montevans',

a Man against the Desolate
Antarctic New York. Wilfred
Fuhle, Jan 1951.

Charcot was in Antarctica on
1908 - 1910. Pourquoi Pas //

Ice-breaker type - floating lab that
could be frozen in would be better for
over wintering than shore base

(Fram) (Jeanette = 3 yrs)

Nuclear sub for under ice work + study of
under surface, study of bottom, dredging + setting
nets

Greatest problem or problems
of shore station are
are:

Pollution: disposal of waste
trash, burnable

metal, hydraulic press

honey, buckets (Steel drums)

Uncontaminated Sea water

trace elements

← Supply, Fuel most important

as it involves

utilities, generators

ⓐ for present ^{use} ⓑ for future

expansion

water: f.w., salt.

← Housing laboratory; quarters
for personnel; storage

"Movability", expansion of facility
location (main base; subsec-
ary ones)

Deeper sea collecting; shallow
water; availability of small
boats.

① Sea work vessel

Accessibility

winter studies


summer "


available

No navy personnel

(SW
Palmer)

Larger ships. Small draggers
Survives wintering, solves pol-
lution problem

 Parcel Id ~~great~~ great
place for air plane work
landing.

Auxiliary Island Base
"Trevassy" (Storehouse) 
Season \$1000 a day
wind generators

Push out board
in well

Air service; important, vs Navy
Check White Board
p. 125

Arthur Wh. Sea elephants
Chin strap + storm Petrel

"COMMITTEE OF 190"
10 COLUMBUS CIRCLE
NEW YORK 19, N.Y.

It's every ~~one~~
and ~~hurry~~
to have any
work at

not clear just
what U.S. P.R.O.
wants to

accomplish
inland
music
you can't
do it
all

Waldo L. Schmitt
U. S. National Museum
Wash. 25, D.C.



Floating, sea going lab.
capable for freezing in
if practicable, could then
work full year round,
in any place desired

^{support} personnel during freezing
period could be less
than when active, or
on move.

Diesel electric drive.

All facilities aboard

If we are going to do
a thoro job, biologically
~~should devote~~ or not do
less than year round
study of animal and
plant life in any given
or selected area

A.P. Crary

on p. 1 I

Chief Scientist

Office of Antarctic Programs

September 12, 1961

(revisions 9/25/61, 11/15/61)

Projected Antarctic Science

Program

Introduction

pp. 19-24
inclusion

in all including

on last 6 pp.

24	pp and six diagrams of status of and anticipated work in Antarctica
----	--

Crary memo
2 sep aspects: knowledge of Antarctica^(II)
characteristics &

[This would cover
biol. survey
(Popul. habits man or
stuff on job all time)]
① exploitation of his know-
ledge for future sci.
& national requirements

Under first heading can be included most
of past and present antarctic work:

regional geology
ice surface ~~and~~ elevations
ice thickness
descriptive biology
meteorological observations, etc.

The second category, though it has
been done concurrently with the first,
deals with more basic objectives such
as the geological and biological history
of Antarctica and the role of the
continent in the heat budget of the south-
ern hemisphere.

Each of these aspects is important

Scientifically the long range objective
is the utilizing of the uniqueness or
simplicity of Antarctica to solve research
problems in basic science which are
world-wide in scope and that could not
be solved as easily elsewhere [what are they?]
[what means
by easily]

Wille Lüh

2nd parting. p. 3

4 The first need is in the field of taxonomy and systematics the classification and description of the flora + fauna, not only of Antarctica but also of the many islands of the high southern latitudes, and even the southern mainlands of other continents.
[Take in all possible territory sounds well =]

Along with this description should go ecological studies of the environmental and climatic factors under which the flora + fauna live, and the ecological tolerance ^{what means} of these organisms to Antarctic cold, which have important implications to human biological adaptation.

11 The waters surrounding Antarctica with varying degrees of ice cover, have been said to contain one of the richest and least known biota in the world."

(TV)

If we ampile (collate) existing collections get out handbooks keys (illustrated) and check lists we can make progress // When "basic" is talked about, I ask you what can be more basic than the identity and the easy recognition of the organic life with which you have to deal which you encounter from day to day and upon which all other biological research, of whatever nature or discipline is predicated or based.

Last paragraph p. 3 and ~~on top~~
~~on top~~ of page 4. (I)

The divisions of marine biology are so endless that it seems futile to attempt to sum up even the more obvious problems. Studies of whales, involved directly in a large and growing commercial interest, have received considerable attention, mainly from the work of the Discovery Committee, although much future work can be done particularly aboard whaling ships. However, other marine vertebrate fauna: the seals and fish of southern waters; and the marine invertebrate fauna, plankton communities, and micro-biological organisms have had less attention. ~~The~~ The end of p. 31 neglect of his branch of science in Antarctica is reflected in the two primary requirements: the ac-

to of p. 4

I'd say "study" VI

acquisition of adequate research
collections for U.S. national
collections, and the systematic
monographing of the material
last bibl. para. p. 4 not copied

Under Oceanography (Physical)
p. 13 of folder, (2nd page of
Oceanog.)

It would appear that operation
from an ice floe, such as has been
done so extensively in the Arctic,
would never be utilized to any great
~~extent~~ degree in the Antarctic. The arctic
ice, being contained in the Arctic
basin, maintains its general aspect
throughout the year while the antarctic
ice, free for unlimited expansion to
the north, would be more hazardous
to work from, except in local
areas such as the Weddell Sea. In

any event, such programs would require the constant availability of outboard/ rescue facilities, and the type of oceanographic work would be quite limited because of logistic restrictions. Operations from Department of Defense ships in general are difficult because of space limitations and primary occupation with other duties, and, with the present emphasis on oceanography in the United States today, it is doubtful if highly-qualified scientific groups could ever be assembled aboard an ice breaker. This applies to some degree also to operations on a submarine, though here the problem, such as water circulation, and character of biological life under ice shelves, are so unique that they would be seriously considered if the out-

look is favorable for the use of a submarine in Antarctic waters. The remaining possibility, that of the research vessel operating with an ice breaker, would open additional areas for research but these would not represent more than a small fraction of the ice-covered areas. The problem, therefore, is narrowed down to the use of icebreakers, or other ships built to work inside the ice pack. Ways and means of ~~increasing~~ increasing scientific operations from icebreakers by improved facilities and opportunities, should be seriously considered.

P. 18 ... and to some extent
the biology and geology programs
have certain basic descriptive
aims that can be scheduled.

However, any attempt to set
down specific plans for basic
research studies, utilizing the
knowledge currently being gained
of the continent, not only would
be unrealistic, but could ~~be~~
easily be detrimental to the
main goal. To be effective
a basic science program must be
a dynamic one, with annual ad-
ditions ~~and~~ dele-

? lot of people
busy at a lot of
dis. projects?

tions and modifications from
any set plan in order that any
new opportunities that arise can
be exploited without delay.
The estimates given below should

There fore, be considered accordingly. The table gives the estimated numbers of scientists exclusive of work on the Ellsworth or other ships; operations at Wilkes, Ellsworth, and foreign stations, and work outside the Antarctic areas.


Projected Est. of Total Nos. of Scientists

	Mc.M. Byrd	Pole	Hallett
1962-63 Summer	80	30	10
1963 Winter	6	8	12
1963-64 Summer	70	20	15
1964 Winter	6	8	16
1964-65 Summer	50	18	18
1965 Winter	6	8	16

	Ellsworth Land	Palmer Peninsula	Total
--	----------------	------------------	-------

1962-63 Summer	4	5	139
1963 Winter	6	4	44
1963-64 Summer	10	20	147
1964 Winter	6	6	48
1964-65 Summer	10	45	153
1965 Winter	6	6	48

Extension past last two listed time periods would continue at that level of operations size & vary

The gage  Estimated no. of scientists based on flow of applications = Not on work to be done, can be as diverse as metabolism of fishes, endurance of bacteria, tagging of penguins, composition of soils and their microbiology.

Last thing ~~that~~ will be thought of will be census of animal ⁺ plant populations, kinds number and dist. may not be basic science but it is certainly basic to all biological science that you can conceive of being carried on out new lab.

Biological Considerations:

Shore-based
Observations
Environment

Variety of ~~deplete~~ environments

Marine: varied shore lines
(beaches etc) sand, shingle
rocks,

bottom types, sand
mud, algal covered, rock,
volcanic ash (latter is wide
spread, too uniform.

salt
water
supply

Fresh water: lakes, ponds,
catchment puddles or
basins under rocks
or rock and shingle giles

Terrestrial: dry valleys
~~various~~ various outcrops,
ice and snow fields.

Organic life, plant and animal
microbiological (soil, snow,
water, ice.
marine, fresh water, terrestrial
bird colonies; seal haul outs

Watch for opportunities to explore
coast behind Weddel Sea.

Physical - practical considerations

Accessibility: ice, wind, weather
fuel supply ^{very} important
} Leaves of absence
} of university people
} evacuation of emer-
} gency cases

Small boat shelter; facilities
for hauling out; ice wind and weather

Water supply freshwater ^(summer time) streams
and lake; dams
to create lake im-
permanent.
Pure salt water
undemineralized
for Lab Use

Housing side: room for future
expansion

Opportunity for trash disposal
to avoid pollution of area

14

All these things require personnel, building, installations of considerable ^{size} or to be expanded in future.

disposal of wastes at some distance from base or buildings, and some service personnel if professionals do not ^{sacrifice} ~~devote~~ research time to chores.

All these things are best cared for on or with a floating laboratory. Everything is at hand including service personnel so woe fully lacking about at least biolabs to day.

~~Utilities~~ are at hand; generally fuel to run them.

Built for over-wintering
~~at the same time~~

5
certainly many additional problems, con-
fronting & shore maintenance and
operations are solved
during winter months

would it be possible to have
a hatch in bottom of each
a ship (and or ice breaker)
for ice hole observations
(operations)

It is true but how does
cost of maintaining
shore station, and supply
it with fuel, equipment,
supplies compare

Could be reasonably small
and professional staff
would be better housed
and able to do more and
better work ~~than~~ ^{clean up} if they
had to do own work.



Who does honey buckets
to day?

You don't need to look for site, you've got your house facilities, utilities service help and years supplies with you. Also a vessel (floating lab) of reasonable size could handle one or two small craft (30 foot) for shore parties & perhaps also have ~~the~~ landing deck for helicopter. Think of revenue cutter, after deck for dredging too, or from smaller boat.

However, should be able to dredge at 600-700 fms.

17

Snow melt even in most carefully selected site & mine, when you got to bottom of melter had an^d amazing lot of silt & trash and dog dirt in ~~it~~. You wondered where it all came from.

Ship would take care of most of it. No.?

Fresh salt water supply unambiminated and (Ede Wohlschag, no to vary more than one degree from ocean water temperature,

~~Where snow sparse thick algal growths near shore~~

Like snow deposits

so seems to be the algal growths near shore

Snow free, relatively ice

free (off thick deep) and grinding

~~ice~~ ^{down} Dipnet, handlines, dredges

The Polar Record

Vol. 11, No. 73 Jan. 1963

Ocean waves & Pack Ice

Edo Q Robin p387-393

Checklist of Sub Antarctic and Antarctic Vascular Flora

S.W. Greene and D.M. Greene

Only taxa reported as native have been included in the "Checklist" but species reported as aliens have been listed in the section headed "Notes on Floras."

Sub-Antarctic zone South Georgia, Prince Edward Island, Îles Crozet, Îles Kerguelen, Heard Island, Macquarie Island

Antarctic zone All land south of lat. 60° S., but including the South Sandwich Islands and Bouvetoya

60°

Dr. Schmitt

USS STATEN ISLAND (AGB-5)
Care of Fleet Post Office
San Francisco, California

AGB5/3120
JPT:eh
17 JAN 63

USS STATEN ISLAND NOTICE 3120

From: Commanding Officer
To: Distribution List
All OOD's
Beach Group
Boat Officers

Subj: Certain Operational Requirements of Palmer Peninsula Expedition,
Deepfreeze 63.

Ref: (a) CTC 43.1 OP ORDER 1-63
(b) USS STATEN ISLAND (AGB-5) NOTICE 5300 dated 16 JAN 1963

1. Purpose. Reference (a) delineates the overall responsibilities in support of Palmer Peninsula Expedition, Deepfreeze 63. This notice sets forth the specific responsibilities and procedures for certain tasks in support of reference (b). These tasks are small boat operations, CIC operations, and communication procedures.

2. Responsibilities. The First Lieutenant shall be responsible for small boat operations. The Operations Officer who is responsible for CIC and Communications Operations, shall assist the First Lieutenant in small boat operations for maximum utilization and efficiency of such operations.

3. Procedures

(A) Small Boat Operations

1. Greenland Cruiser

a. Responsibilities

1. Survey
2. Rescue

b. Shall have right of way seaward of surfline or 50 yards from beach if no surf. (Except when salvage boat is engaged in salvage operation)

c. Capabilities

1. Radio
2. Fathometer
3. Visual Signaling

2. LCVP #1 - Salvage boat - shows "Q" Flag

a. Responsibilities

1. Salvage and assistance of other boats
2. Other duties as assigned not to interfere with primary duties

b. Shall have right of way when salvaging

c. Capabilities

- (1) Light salvage gear
- (2) Radio

3. LCVP #2

a. Responsibilities

1. Land Beach Party
2. Beach survey shoreward of surfline or within 50 yards of beach if no surfline.
3. Biological collection of fish traps.
4. General utility operation

b. Shall have right of way shoreward of surfline or within 50 yards of shore line.

c. Capabilities - Radio

4. 26' motor launch - not to be used

5. GIG - not to be used

6. All boats shall obtain permission from the CO prior to departing the ship and from the beach guard prior to leaving the beach.

7. Landings - All landings will be in accordance with current policies. No landings will be attempted in a breaking surf of 2 feet or higher, on rocky beaches, or where any other adverse condition exists which would endanger the boat or its occupants.

8. Emergency Procedures.

(a) The boats will be equipped with sufficient survival equipment, as outlined in reference (a) however every attempt must be made to save the boat if possible without endangering life. If the event a boat loses propulsion an attempt will be made to anchor as soon as possible. The standard emergency signalling procedure as per section B of this notice will be used.

B. Communication

(1) Primary communications will be by radio on following frequencies

- (a) Ship to shore - 3220 KCS
- (b) Boat Control - 3270 KCS
- (c) Both circuits will be controlled in CIC.

(2) Radio Communications will be established and maintained throughout the period that boats are operating away from the ship and/or the shore party is in the beach area. This will be accomplished in the following manner:

(a) Shore party will be furnished with a portable battery operated transmitter - receiver of the type normally used by the New Zealand Army in the field. This radio can cover both MF and HF ranges. A radioman-electronics technician will operate the shore party radio.

(b) The two LCVP's will be furnished with radios of the same nature as described above, and will be operated by a designated boat crewman.

(c) The Greenland Cruiser will use the TCS Transmitter-Receiver and will operate by a designated crewman.

(d) Designations and call signs

STATEN ISLAND
LCVP 1
LCVP 2
GREENLAND CRUISER
BEACH GROUP

STATEN ISLAND
CLAPPER 1
CLAPPER 2
CLAPPER 3
BEACH GROUP

(a) Traffic Control and Schedules

(1) All nets will be guarded continuously by STATEN ISLAND. Due to the inability of the beach group and boat crews to guard their nets on a continuous basis, the beach group and the crew operators other than Greenland Cruiser will guard their respective nets for traffic originated by STATEN ISLAND 15 minutes every hour, from the hour until 15 minutes after the hour, i.e. 0000-0015, 0100-0115, i.e. The Greenland Cruiser will maintain a continuous guard. Boat radio operators and beach group may originate traffic at any time. Traffic from Beach Group to the boats, or vice versa will be transmitted to STATEN ISLAND for further relay.

(f) Miscellaneous

(1) Normal radio telephone procedures will apply throughout the operation. Only designated radio operators in the beach group and in the respective boat will operate the radio.

(2) All nets will be guarded by STATEN ISLAND CIC. STATEN ISLAND CIC will be net control for all nets.

(3) TCS in CIC will be set up on ship to shore frequency 3220 KCS. TCS in radio one will be set up for boat control on 3270 KCS. RPU's will be selected and designated as usage and convenience dictate.

3 Visual signalling will be possible with Greenland Cruiser and may be possible with beach. No visual signalling is anticipated with LCVP's with the exception of flag hoists as follows:

- (a) "C" - all boats return to the ship
- (b) Pennant 1 or pennant 2 - LCVP #1 or #2 (as designated)
- (c) Pennant 3 - Greenland Cruiser
- (d) "C" preceded by boat designation pennant - That boat return to the ship.
- (e) "B" preceded by boat designation pennant - That boat proceed to the beach.
- (f) "C" preceded by boat designation pennant or beach group flag "P" indicated unit come up on radio for traffic.

4. The following are the signals for directing the movement of the boats:

Flag or blinker	Pyrrotechnics	Meaning
(a) 1	1 white star	Steer straight away from ship

125/9170

(b) 1 Port	1 Red Star	Steer left of line looking from boat to ship
(c) 1 Stbd	1 Green Star	Steer right of line looking from boat to ship
(d) 2	2 Green Stars	Steer straight for ship
(e) "Q"	2 Red Stars	Return to ship

The boat designator pennant will indicate the boat being addressed.

5. Signals from boat.

(a) "S" Flag - require salvage boat

(b) Red flares, gunshots, or "N" flag - I am sinking or in danger of foundering or sinking.

C. Combat Information Center

(1) General: The Combat Information Center will be the information and control center for aircraft, shore, and boat operations. Communications to and from all three will be on the bridge as well as CIC with primary control in CIC. The procedures for controlling and gathering information from each will be as follows:

(a) Ship to Shore Operations. The ship to shore communications will be set up in CIC as per section B of this notice. Portable transceivers will be used by shore personnel. Information received from shore will be recorded on a tape recorder and transferred into the CIC log.

(b) Ship to Boat Operations. All boats prior to leaving the ship will check in to net with CIC. The surface search radar will be used to track and vector the boats. It is important that a continuous position of each boat be maintained in case of reduced visibility or other emergencies.

1. The two LCV's will be primarily used for beach landings and salvage operations. Each will maintain communications by use of Portable Transceivers. CIC will keep track of each; and the landing sites of each.

2. The Greenland Cruiser will be the primary control boat. Its main function will be that of obtaining depth soundings and other hydrographic data. The boat will proceed the ship by approximately 500 yards; and will report sounding continuously. Control of the Greenland Cruiser during this period will be on the bridge. These soundings will be recorded on a large scale chart

in Combat. After anchoring the Greenland Cruiser will sound the entire circle through which the ship is able to swing on her anchor. After the ship is secure in her anchorage or haven, control of the cruiser will be passed to CIC. For the detailed survey of a desired area a positive position for the ship will be obtained by both radar and visual means. The cruiser will be vectored along set tracks and sounding passed to CIC by radio will be recorded on the chart previously set up for recording such data.

(c) Prominent objects for radar bearings will be logged and noted on chart. Information received in the areas from the boats or helos will be recorded in logs and laid out on the track on a geographic plot.

(d) On approaching the areas of investigation all means for safe navigation will be used. As much data as possible will be obtained and recorded such as by use of radar camera, current data, prominent points, etc. Positive control will be maintained of boats and helos at all times and their position and status kept current.

J. J. METSHEL

Dr. Schmidt

UNITED STATES AIR FORCE (AGD-1)
Command Flight Test Office
San Francisco, California

AGIS 5300
ATC:ju
6 JAN 53

USS STATION ISLAND NOTION 5300

From: Commanding Officer
To: Chief Station Dept

Subject: Island Station Survey Operations

Ref: (1) AGIS 5300, 1-53
(2) Investigation Data Sheets
(3) Island Investigation Data Sheets

Equip: (1) Helicopter Equipment, Helicopters
(2) Helicopter Equipment, Grounded Cruiser
(3) Helicopter Equipment, LARS
(4) Helicopter Equipment, Island
(5) Helicopter Equipment, Individual Packs

1. Objectives

- (a) To determine the needs of operations for taking survey
- (b) To provide special instructions relevant to these operations
- (c) To assign responsibilities for the accomplishment of the

2. To determine the objectives of relevant (a) in the Island Station, the following sequence of operations shall be followed:

Island Investigation Investigation Data:

- (1) Helicopter approach to site.
- (2) Helicopter landing details.
- (3) Helicopter landing.
- (4) Helicopter landing for preliminary reconnaissance of island approach and shore sites.
- (5) Helicopter landing on shore of ship and some forward view of the shoreline.
- (6) Helicopter approach points. Take photographs of approach points.
- (7) Helicopter landing on shore or in air.
- (8) Helicopter landing on shore photos.

10/20/70 - 10/20/70

10/20/70 - 10/20/70

10/20/70 - 10/20/70

10/20/70 - 10/20/70

- (1) 10/20/70 - 10/20/70
- (2) 10/20/70 - 10/20/70
- (3) 10/20/70 - 10/20/70

10/20/70 - 10/20/70

10/20/70 - 10/20/70

10/20/70 - 10/20/70

10/20/70 - 10/20/70

10/20/70 - 10/20/70

10/20/70 - 10/20/70

10/20/70 - 10/20/70

10/20/70 - 10/20/70

(6) Waste Disposal: All waste disposal activities shall be performed in accordance with the following instructions. All waste disposal activities shall be performed in accordance with the following instructions. All waste disposal activities shall be performed in accordance with the following instructions.

(7) Waste Disposal

(a) All trash and refuse, paper and paper products, and other materials shall be disposed of in accordance with the following instructions.

(b) The waste disposal officer shall maintain accurate records of all waste disposal activities and shall ensure that all waste is disposed of in accordance with the following instructions.

3. Duties and Responsibilities: The duties and responsibilities listed herein are specifically to the objective of reference (a) and to the collection of data in reference (b) and (c). The officers assigned responsibility for the collection of data are also responsible for assigning personnel, developing the techniques for taking data, and providing all related charts, logs, observations, traces, etc. Additionally they are responsible for coordinating, coordinating, and cooperating with CTF 43, WDC, or other Company personnel, where such action is necessary.

(a) Responsibilities for Preliminary Investigation Data Sheet (Reference 5)

Page 1	DC JORDEN
Page 2	LT NASH
Page 3	LT NASH
Page 4	LT NASH
Page 5	LT NASH
Page 6	LT NASH
Page 7	LT NASH

(b) Responsibilities for Detailed Investigation Data Sheet

Page 8	LT NASH
Page 9	LT NASH
Page 10, para 2(a) & 2(b)	LTJG NASH
Page 10, para 2(c) & 2(d)	LT NASH
Page 11	LT NASH
Page 12	LT NASH
Page 13	LT NASH

J. J. NETSCHER

Exhibit 12

SUBVIVANT GEAR - H. H. H. H. H.

1. HUI-94

- 2 sleeping bags ()
- 3 days ration - 2 people ()
- 1 pistol w/clip ()
- 1 entrenching tool ()
- 1 poncho ()
- 1 water canteen (full) ()

2. HRS-30

- 5 sleeping bags ()
- 3 days ration - 3 people ()
- 2 pistols w/clip ()
- 1 entrenching tool ()
- 2 ponchos ()
- 3 water canteens (full) ()

SURVIVAL AND OPERATING EQUIPMENT - CONTINUED

1. Boat Chocks

1 mallet	()
1-10" crescent wrench	()
1 pair pliers	()
1 hammer	()
1 can of nails	()
1 small roll of seizing wire	()
6" of number 4 canvas	()
1 chisel	()
1 flashlight	()
1 axe	()
1 pair of rubber gloves	()
1 box of matches	()
1 coil of marlin (1000 feet/ft)	()
2 rolls of toilet paper	()
1 first aid kit	()

2. Boat Survival Equipment

4 aluminum cans	()
1 yellow cover and fuel tank	()
1 Araldite gun and magazine	()
1 medical kit	()
3 blankets	()
4 sets of 1-weather stickers (1000)	()
1 rifle (Remington)	()
1 set of green and red signals	()

SURVIVAL AND RESCUE TIME TABLE

Item	Quantity	Weight (kg)	Volume (liters)
2. Boat Survival Equipment (DWARF)			
1 15-man life raft	1	150	150
4 boxes 1 ration	4	40	40
2 liquid cans for water (empty)	2	20	20
2 back packs	2	40	40
3. Boat Operating Equipment			
1 boat 200	1	200	200
1 boat 200	1	200	200
Liquid Cans			
2 5-gal fuel oil	2	100	100
2 5-gal preservatives and water	2	100	100
1 5-gal kerosene oil	1	50	50
2 anchors 15/150 or 2 1/2" line each	2	100	100
1 bowline bridle	1	50	50
1 200 lb. line 15/150 or 2 1/2" line	1	200	200
50' of 1/2" fiber 6 thread	1	50	50
2 deck blocks	2	40	40
1 lead line - 12 fathoms	1	120	120
1 heavy line	1	100	100
1 sled	1	50	50
1 grapple, hook, chain and line	1	50	50
1 radar reflector	1	50	50
1 CO2 fire extinguisher	1	50	50
2 fenders	2	40	40
1 boat 200	1	200	200
100 lbs. supplies	1	100	100

ANNEXURE (1)

SURVIVAL AND COMBAT/RESCUE BOAT EQUIPMENT LIST

1. Boat Stores		
2. Boat Survival Equipment		
1 life raft	()
8 life jackets	()
2 cans of water	()
2 cases of (5/1) rations	()
1 set of pyrotechnic signals	()
10 blankets	()
3. Boat Operating Equipment		
1 life ring	()
1 signal light	()
1 set semaphore flag	()
1 dingy	()
2 anchors w/150' of 2 1/2" line each	()
1 boat log	()
4 sets of foul weather suits	()
2 fooders	()
1 fuel tank	()
1 grapnel with cable and line	()
12 hour markers for shadow screen	()
2 lead lines - 12 rations	()
2 brass jugs	()
3 rifle magazines	()
1000 rounds of 7.62mm ammo	()

FIELD EQUIPMENT

1 tent	1	1
1 Tupperware	1	1
1 case of 5/11 rations	1	1
1 spatula	1	1
1 radio	1	1
1 medical kit	1	1
4 boxes of med. sup. (prepackaged)	4	4
1 5/2 fire ax. axolotl	1	1
1 water can	1	1

ENCLOSURES (5)

INDIVIDUAL PACKS

1 sleeping bag	()
3 day rations	()
1 bayonet w/blade	()
1 canteen w/cup	()
1 poncho	()
1 box of water proofed matches	()
2 signal flares	()
1 mess spoon	()
1 can opener	()
toilet paper	()
1 entrenching tool	()

ENCLOSURE (5)

PREPARED By LT MASH.

DIR. Schwert's Copy

II. Detailed Investigation Data Sheet

I. Site

1. Name

2. Lat _____ Long _____

3. Relation to other stations _____

4. Surface materials

a.

b.

c.

5. Underlying strata material

6. Permafrost conditions

7. Core boring taken YES NO

8. Soil samples taken YES NO

9. Topo taken YES NO

10. Attached sketch and description of

a. Waste and trash disposal area YES NO

b. Antenna farm location YES NO

c. Emergency stores area YES NO

11. Natural terrain protection. Comments.

II. Detailed Investigation Data Sheet

H. Access

1. Ship

a. Protection afforded water area

b. Classification of harbor bottom

c. Attach data sheet of soundings of harbor and mooring area _____

d. Fuel delivery

(1) Hose from ship

(2) Drum

e. Comments on discharging cargo

f. Complete write-up of navigational hazards.

II. Detailed Investigation Data Sheet

B. Access

2. Boat ops

a. Mooring area

b. Beaching area

c. Wharf or pier potential

d. Storage and repair area

II. Detailed Investigation Data Sheet

B. Access

3. Inland

a. Transportation equipment

b. Supply storage area

(1) Size

(2) Location

(3) Comments

II. Detailed Investigation Data Sheet

B. Access

4. Air

a. Location: Heading from station _____

Distance _____ Elevation _____

b. Surface

(1) Snow

(2) Ice

(3) Soil

c. Size _____

d. Access

II. Detailed Investigation Data Sheet

C. Photo coverage

1. Station site

- a. Panoramic _____
- b. Vertical _____
- c. High oblique _____

2. Access routes

- a. Vertical _____
- b. High obliques _____

3. A/C landing site

- a. Vertical _____
- b. Panoramic _____
- c. High oblique _____

4. Ground photos of

- a. Water sources 1, 2, 3
- b. Building sites _____
- c. Geological formations _____
- d. Harbor _____
- e. Beach _____
- f. Access routes

(1) Beach to station _____

(2) Station to A/C landing area _____

For Dr. Schmitt

ATTACHMENT
To 1/11/64 ops Order
Tf. 43.1.1

STATION 1975

A. PRELIMINARY RECONNOISSANCE - will be made of areas remaining very potential as well as sites. The preliminary data on these sites will be recorded. If favorable results are noted after preliminary reconnaissance, a detailed investigation of the region will be conducted.

A. Ecologic Program Objectives are the primary reason for the exploration and will be the governing factors. They are, but not limited to:

1. General biology potential.
2. Ecological potential.
3. Bird and animal population.
4. Density and general types flora.

B. Site Criteria in determining station site, initial factors involved are:

1. Distance from shoreline.
2. Acreage of terrain acceptable for buildings.
3. General elevation and area relief.
4. Water source in winter and summer as well as quality.

C. Access to station site area by sea is a basic requirement. Knowledge of ship and small boat logistic potential is very essential to station success.

1. Ship Logistics

- a. Anchorage site and its distance from shoreline.
- b. Depth of anchorage and harbor area by limited soundings.
- c. General topography of shoreline and beach area.
- d. Current ice conditions.
- e. General navigational hazards.

2. Boat Logistics General investigation of beach for mooring and launching boats.

3. Inland Logistical Areas between beach and station site.

D. Associated Data.

1. Meteorology.

- a. Upper air soundings to be taken every 12 hours.
- b. Current surface temperatures.
- c. Current surface winds.
- d. Any precipitation will be recorded.

2. Photo coverage will be given all sites visited. These will include:

- a. Panoramic from ship's bridge of shoreline.
- b. High oblique of shoreline and proposed station site.
- c. Low oblique of shoreline and proposed station site.
- d. Vertical of shoreline and proposed station site.
- e. Radar probe photo of area.

3. Location of site with respect to other stations will be noted. This will include name, nationality, description and general comments of existing station where available.

4. Possible satellite camp sites will be noted with emphasis placed on suitability for small building site and accessibility. These site notes will also include location and mooring sites of boats in area.

II. DETAILED RECONNAISSANCE OF INTERESTING SITES

A. Additional Site Criteria required.

1. Proposed station name, with latitude and longitude.
2. Type surface materials and underlying strata including soil samples and core borings where possible.
3. Depending on relief of area, two or five foot contours are to be taken of selected sites.
4. Waste and trash disposal areas.
5. Location of antenna farm within reasonable distance of site with proper clearance requirements.

6. Degree of protection of site by natural terrain.

7. Area where emergency stores could be located.

B. Additional Access Data

1. Ship Logistics.

a. Soundings of harbor and mooring areas.

b. Protection afforded water area.

c. Method and capabilities of discharging cargo onto beach.

d. Classification of harbor bottom.

e. Detailed description and location of navigational hazards.

f. Accessibility for fuel delivery by:

(1) hose from ship

(2) drums

(3) other

2. Boat Logistics.

a. Beaching area sufficient for small 14 foot outboards and 40 foot inboard.

b. Suitable mooring area for 40 foot station boat.

c. Possibilities of wharf or pier.

d. Storage and repair area availability on beach.

3. Inland Logistics.

a. Type transport between beach and station.

b. Storage location of general supplies including direction from station.

4. Air Logistics. Long range program.

a. Air operations site location with respect to station.

b. Soil, or surface characteristics, this includes comments on ice and snow.

c. Size of area that is suitable for aircraft landing facility.

d. Access conditions between runway and other sites.

C. Detailed Photographic Coverage. In order to present the big picture of each site, following coverage is required:

1. Panoramic views of proposed station site and proposed aircraft landing areas.

2. Vertical and high oblique of:

a. Proposed station site.

b. Proposed aircraft landing area.

c. Access routes.

3. Ground photos of:

a. Water sources.

b. Building sites.

c. Geological formations.

d. Aircraft landing area.

e. Harbors.

f. Beach.

g. Access routes.

III. REPORT OF RECONNAISSANCE.

A. Report will endeavor to give a clear account of conditions encountered at all sites visited from harbor and beach conditions at the time of visit to the extent of suitable areas for the satellite camps and aircraft landing locations.

B. Recommendations on station location, proposed layout of station, type of vehicles and equipment suitable for area, and possible types of construction will be made.

C. The report will be supplemented with:

1. ...

2. ...

3. ...

4. ...

PREPARED BY LT NASH

DR. SCHMITT'S COPY

Page 1

I. Preliminary Investigation Data Sheet.

A. Science Information

1. General Biology Potential comments.

2. Geological Potential comments.

3. Population Data.

4. Flora, density and general types.

I. Preliminary Investigation Data Sheet

B. Site Data

1. Name _____
2. Location: Lat _____, Long _____
3. Distance from shoreline _____
4. Size of area available _____
5. Water source
 - a. Summer _____
 - b. Winter _____
 - c. Sample taken YES NO
6. Approximate elevation _____
7. Area relief _____

8. Comments _____

I. Preliminary Investigation Data Sheet

C. Access

1. By ship

a. Current ice conditions

b. General navigational hazards

c. Anchorage site location

d. General Topo of shoreline and beach area.

e. Harbor and anchorage area depth

I. Preliminary Investigation Data Sheet.

C. Access

2. Boat handling data

a. Comments on mooring and launching sites.

I. Preliminary Investigation Data Sheet

C. Access

3. Inland

a. Comments on access between beach and station site

I. Preliminary Investigation Data Sheet

D. Associated data

1. Meteorology

- a. Attach copy of ships log concerning meteorological conditions. _____
- b. Attach copy of upper air soundings report. To be taken every 12 hours _____

I. Preliminary Investigation Data Sheet

D. Associated data

2. Photo coverage

a. Panoramic from ships bridge of shoreline _____

b. High oblique of
Shoreline _____

Proposed station site _____

c. Low oblique of
Shoreline _____

Proposed station site _____

d. Vertical of
Shoreline _____

Proposed station site _____

e. Radar scope photo of coastline _____

For DR. Schmitt

U. S. NAVAL SURVEILLANCE HIGH ANTARCTICA
NAVY NUMBER 531
FLIGHT LOG OFFICE
SAN FRANCISCO, CALIFORNIA

FFS/49
31/800
3120
Serial 64
8 January 1963

From: Commander Task Unit 43.1.1
To: Distribution List

(NO): Commander Task Unit 43.1.1 Operation Order No. 1-63, promulgation of

1. Commander Task Unit 43.1.1 Operation Order No. 1-63 is promulgated herewith. This Operation Order is based on Commander Task Force FOURTY-THREE Operation Order 1-62.

2. This Operation Order is effective 1963.

Price Lewis Jr.
PRICE LEWIS JR.

Distribution:

- Chief of Naval Operations
- Commander in Chief, U. S. Atlantic Fleet
- Commander in Chief, U. S. Pacific Fleet
- President, West Vir College
- U. S. Antarctic Projects Officer
- U. S. Antarctic Research Program
- U. S. Naval Airbase and Station (at Air Wellington, N.Z.)
- U. S. Navy Hydrographic Office
- U. S. Public Health Service (ATTN: CAPT ANDERSON)
- Chief, Bureau of Yards and Docks
- PIO, Fleet Log Office, San Francisco
- CDC, National Center for Disease Control, Washington, D. C.
- CIC, Research Report Center, Norfolk, Va.
- CIC, Research Report Center, Pearl Harbor
- CIC, Research Report Center, Boston
- CIC, Research Report Center, San Francisco
- CIC, NAVSUTREP ANALYTICAL Department, Christchurch
- CIC, NAVSUTREP ANALYTICAL Department, Trondheim

Operation Order

CTU 43.1.1, No. 1-63

U. S. Atlantic Fleet
Commander Task Force FORTY-THREE
(Commander, U. S. Naval Support Force,
Antarctica)
Advance Headquarters, Commander,
U. S. Naval Support Force, Antarctica
Navy 51, Fleet Post Office
San Francisco, California

Ref: (a) NSF ltr of 8 Nov 1962
(b) CTF-43 OPLAN 1-62

Encl: (1) Investigation Data Sheet

Task Organization

TU 43.1.1 Palmer Peninsula Unit	CDR Price Lewis, Jr., USNR
USS STATEN ISLAND (AGB-5)	CDR J. J. Metschel, USN

1. General Situation:

a. To penetrate Antarctic Sea regions in vicinity of Palmer Peninsula to perform tasks as assigned by CTF-43 OPLAN 1-62

b. The only other known U. S. units or ships operating in the area is USNS ELTANIN (T-AN-270).

c. Assumption:

(1) That Task Unit 43.1.1 will be formed on or about 5 January 1963.

(2) That CTF 43 1.1 will depart in USS STATEN ISLAND (AGB-5) for Palmer Peninsula.

(3) That ice conditions will permit penetration of Antarctic region in vicinity of Palmer Peninsula to carry out mission.

(4) That mission into Palmer Region will be accomplished by not later than 15 March 1963.

2. Mission:

a. To examine accessible coast line of Palmer Peninsula and its offlying islands between Ballinghausen Sea and the Bransfield Strait and South Shetland Islands in order to locate a suitable site for possible installation of small scientific station during DEEP FREEZE 64.

As designated by reference (a) the following areas are considered biologically interesting by National Science Foundation:

- (1) Snow Hill Island area
- (2) de Gerlache Strait area
- (3) Granddida Channel
- (4) Marin Darbel Bay
- (5) Adelaide Island

(6) South Shetland
Islands

Operation Order
CTU 4351.1.1. No. 1-63

- b. To support other designated USARP scientific projects.
- c. Conduct hydrographic surveys where possible.
- d. Make oceanographic observations when conditions permit.

3. Execution:

- a. Commander, Task Force FORTY THREE will:

- (1) Provide engineering assistance for site investigations, and
- (2) Photographic personnel to ensure adequate photo coverage.

- b. National Science Foundation:

(1) By reference (a), Mr. John Crowell was designated National Science Foundation Senior Representative; Dr. Waldo Schmitt, biology consultant and Captain E. A. McDonald, USN (Ret) as Special Consultant.

(2) Mr. Tom Berg, geologist, has been designated to examine areas for geological importance.

- c. Commander Ship Unit:

- (1) Be in charge all unit operations.
- (2) Assign helicopter support to exploration parties.

(3) Coordinate all matters with National Science Foundation Senior Representative and Navy personnel.

- d. Ship's Commanding Officer:

- (1) Provide personnel as required to support site investigations;
- (2) Furnish data as requested on enclosure (1) that falls within his sphere of task functions.
- (3) Provide ship/shore communications support for exploration parties.

4. Information of Special Interest.

a. It is the intent of Ship Unit Commander to Assist other countries with stations in the Palmer region to extent possible within limits of personnel, equipment and mission of Task Unit. This assistance might include delivery of mail, personnel, and provisions, technical assistance, evacuation of personnel, and other items emergent in nature.

Operation Order
OPU 43-1-1, rev. 1-63

b. Relations with personnel of other countries in the Palmer area.

(1) Contacts between U. S. forces and foreign nationals will be initiated by Senior Representatives, National Science Foundation and Commander Ship Unit 43-1-1.

(2) At all times contacts between U. S. personnel and foreign nationals will be friendly in manner, with courtesy and respect for the individuals and their work in Antarctica.

(3) The nature of the mission as a data collecting expedition, will be explained to foreign nationals. Where possible information that will aid in accomplishing the mission will be collected from foreign personnel in the area.

c. Property of other countries.

(1) Property rights of other countries will be observed by all personnel.

(2) The collection of souvenirs at sites presently or previously occupied by other nations is forbidden.

(3) Due care will be taken while in and around these sites. The stations will be left as found. In the event property is damaged, a report will immediately be made to Ship Unit Commander describing damage, giving location, and stating events that led to occurrence.

d. No penguin rookeries, seal colonies or other animal inhabited areas will be disturbed. Visits to such areas will be confined to those who have requirements to do so.

e. This is the first U. S. exploration of this nature into the Palmer area. Accordingly the conduct of all personnel is to be beyond reproach during the entire exploration. This includes conduct at ports of call in South America enroute to homeport. Violations will be serious offenses and dealt with accordingly.

5. This Operation Order is effective immediately.


PRICE LEWIS, JR.
Commander, USNR
Commander, Task Unit 43-1-1

Done Dec. ⁵⁻⁶ 1962

POINTS TO BE CONSIDERED IN SITE SELECTION

- A) ACCESSIBILITY: (by surface ship
(by plane

involved in both instances are weather, wind and ice conditions; type landing areas; delivery of supplies; heavy equipment; and particularly fuel. Evacuation of emergency cases.

- B) HARBOR FACILITIES: for station bases boats.

involved are ice, wind and weather. Depth of water, currents, mooring area, anchorage, beach head, landing, suitability for construction of marine railway or similar facility for station vessel, and/or boats and for landing supplies.

- C) HOUSING SITE: room for expansion; character of site; extent of snow or ice free land.

Look for rock area on which to build

- D) WATER SUPPLY: glacial ice; permanent snow deposits (potential of each) by distillation. Fresh water lakes (summer streams).

- E) BIOLOGICAL FEATURES OF AREA:

(1) Variety and abundance (distribution) of animal and plant life.

- | | |
|----------------|--|
| a) Marine | (Bird rookeries, seal hauling ground, plant growth (lichen mosses) tests or trials with fish traps hook and line townet hauls.) Microbiological organisms. |
| b) Terrestrial | |
| c) Fresh Water | |

(2) Variety of environments.

- a) Marine shore, beaches, sand, rock or shingle.
Bottom Types- sand, mud algal covered, rock, volcanic ash.

b) Fresh Water

lake, ponds, puddles, catchment basins, under rocks, summer streams.

c) Terrestrial

(as under Fresh Water), dry valleys, soil types in evidence, glacial moraines, outcrops of various sorts (geol. formation).

In all instances - distance from station site is an important consideration; the more of a varied environment and type of animal or plant life within easy reach (50 mile radius), the more valuable the site.

SAMPLING OF ANIMAL AND PLANT LIFE

- AT EACH SITE OR ANCHORAGE

1. After ship comes to anchor, would like 2, 3 or more traps set out between ships anchorage and shore landing in 4 or less fathoms.
- 2.a Towner haul to be made over ship's side (or stern) while ship is anchored if current is sufficiently strong to sustain net for straining water.
- b Otherwise a brief tow to be made from boat returning from shore - at which time slow speed for about 5 mins. while net is over side.
3. Hand line fishing by crew aboard ship is requested, or encouraged if men do indulge in over the side fishing (if permitted) in off duty hours.
4. Helicopter flight over site area to be examined; should cover area to spot fresh water, lakes, ponds or streams, glaciers (for possible water supply), "dry" valleys if any, bird rookeries, seal hauling grounds, stands of plant life.

If possible and practicable, samples of plant life should be obtained, as well as bird nest debris, and tow net hauls in suitable bodies of fresh water.

Work and materials needed for operations suggested above:

See "SHIP'S SERVICES AND STORES". -

SHIPS SERVICES AND STORES (REQUESTED OF)

1. a En route Palmer Land would like extra funnel (truncated cone of wire mesh or sheet metal) added or inserted opposite present one, in each 4 ft. trap. (If practicable) U.S.A.R.P. will endeavour to supply wire mesh.
 - b Bridles to be rigged on each trap for lifting same, and anchors (or heavy weights) for buoy lines; also floats and flags needed. Can be made from lumber stock on board.
 - c Lines for traps (operating in 5 fathoms or less of water, 10 to 15 fathoms line for each trap. Obtainable aboard ship?)
2. a Light line for tow nets, perhaps 3X as long as height of ship's rail above water line. Obtainable aboard ship?
 - b Rack of wood to support 3 tin funnels each with 150 watt or better light suspended above each to drive animal life in debris and plant material placed in each funnel, down into bottle under each funnel.

4. Fishing lines: Are not lines (and hooks) available aboard for recreation purposes of crew? To be furnished by U.S.A.R.P. if necessary.

{ duplication }

3. Fishing lines and hooks for hand lining over ship's side, by crew members off duty. However, it is believed that crew members have lines available for recreational purposes.

4. Supply of paper and cloth bags at least 6 x 10 inches long for soil and plant samples, and bird nest debris.

RECOMMENDATIONS

The following recommendations are put forward as a guide to the survey team who are to carry out the inspection of suitable sites in the Palmer Peninsula.

1. Biology.

As the emphasis is on the establishment of a biological station, it is suggested that: A) A complete log be kept of all bird and seal rookeries, areas rich in flora, whales and other marine life. This daily log to cover all observations both at sites inspected and whilst travelling. B) If possible a small plankton net could be used to collect samples to attest the richness of all areas. These observations could form a basis for determining the nature of future research.

2. Ice Conditions. A daily sea-ice log should be kept. If foreign bases are visited an exchange of information covering previous years ice conditions would be of interest for future planning of boat travel in the area. Reprints of maps for plotting ice conditions are available.

3. Site Assessment. It is suggested that each member of the survey group make out a standard form for recording observations similar in format to one listed on next page. This would insure coverage of all major points in determining the suitability of a site. Individuals could also add to these forms any other relevant data which they consider useful in their specific field.

For a greater part of the site inspection, helicopters will most likely be used for their speed in covering an area. This is advantageous in some respects, but any site which has future potential should be visited by boat to effect the landing conditions as this operation is primarily for the utilization of small boats in aiding marine and littoral studies.

The resupply by C130 or similar type aircraft in the future is a possibility with airfields such as "Chabunco" located north of Punta Arenas^{Chile} giving direct connections to North America. From Punta Arenas southwards to Deception Island is 650 miles, to Anvers Island 750 and to Adelaide Island 900 miles. Adelaide and Deception Island would both operate large transports with ease. It is recommended that Anvers Island be checked for this type operation as a base here would be in an excellent central position for working north and south ^{of along} the Peninsula.

Weather Forecasts

It is recommended that the Chief Meteorological Officer, Port Stanley, Falkland Islands be approached for the issue of a daily weather forecast whilst ship is operating in the area. Ships weather observations may be sent to Port Stanley for inclusion in FICOL broadcast.

Charts, maps and air photography of all areas are held by Office of Antarctic Programs. It is recommended that copies of these be furnished to the OAP-NSF Representative for use aboard whilst engaged in the site inspection.

On leaving the peninsula it is recommended, if time allows that ^a visit _^ be made ^{to} Punta Arenas, Ushuaia, and Port Stanley, Falkland Islands to assess potential of these areas as a supply route to the peninsula.

- (A) Boat dredge Wm. Sawesby Lincoln Ellsworth
McLintosh + Guntter (Kemp)
- (B) Best site for central station where facilities of a laboratory, slipway for boats, boat store, repair shop in addition to living quarters can adequately be located.
- (A)

Area A. South Shetlands

Site 1. Penguin Id. has penguin rookeries
not much else

Site 2 Cape Lions Rump has elephant seals
has foul ground and penguin rookeries

good anchorage in 20 fms in volcanic ash
good shelter in fairly high winds.

Site 3 Kellar Peninsula

ample space for buildings
overland travel stiff climb.

Need strong boat cooper sheathed against ^{ice}

good anchorage in Martel Inlet ^{Shetlands.}

is largest enclosed area of water in South
was harbor for factory ships —

Ice and
bad

II Site 4 Point Thomas
much foul ground

breeding ground
of many birds.

No shelter
could visit quite open to all
weather, and no
shelter or anchorage
afforded for ships off-
shore.

One of few areas
where colonies of
gentoo, chinstrap
and adelia penguins
breed in adjacent
rookeries. and
occasional fur seal

Under Area A listing sites you have
Site 5, Potters Cove on page Area A Site 5
it is given as Potter Cove, no s.

is one of best anchorages in the
South Shetlands

I

Deception Id
Fly-bouty
6.50 miles from
Punta Arenas

Beaches of fine sand and gravel
gentle slope and angle room for
[all] operations. } Great watering area
for ships.

varied
bottom.

rough shallow very good anchorage.

Place for traps
lines gill nets
nylon.

Bottom mud and clay

No need floating pier
Ice conditions good.

Water supply good

Beach good for large scale
helicopter operations.

Check ice plateau for Antar

Birds nest
Giant Petrel
Skua
Pomarine gull
shearbill
Wilson's Petrel
No penguins

Several S.W. lakes
absence of penguins
an advantage

but are over on
Pt Thomas just
— miles away
Elephant seals &
fur seals in small
numbers

Site 6 Ardley Island

at low tide can walk over to King George
Island.

Island relatively low and flat.
suitable for a/c

Fair anchorage

recommended
as a secondary
site (?)

Area A.
Side ?

No shelter

→
recommended
for possible
Central Station

Suffield Point

No shelter for ships

(Beach pebbles and sand

~~Mann. f.w. lakes.~~

Space in plenty for g/c

Good anchorage

Abundant in
Filix + Saurus

Site 8

Harmony Cove

No shelter from southerly swell

Abundant
bird life
penguin
rookeries



Half Moon Id

see Sect. III A.

Case # D1-13-01

Area B.

Side 1
Dundee Id
Welchness
no beach

Just a piece
of good ground
for building
up on

Dundee Id
Hope Bay Ellsworth's 1935
Base of operations
Good anchorage but out in open
What about shelter

No lakes } catchment basin could be
devised

Pack ice at times clutters place
makes landings difficult.

% Helicopters in } has facilities
or snow
ice
+ gravel
only area with all

Unloading easy except when
ice is in but clears with
change of wind.

Bird life not abundant.

No!
Site 2

Hope Bay, Trinity Peninsula
unusual wind conditions make parking of air craft
dangerous ^{need} hangars

All labor
is getting
off and
on shore
is huge
effort

Landings
should be
effort free
easy of access
and departure
at all times

Rocky landing difficult except at
high tide ^{at some distance} has lakes <sup>rockery over
may with some
habitation.</sup>

Ice foot which has to be removed
most years Too much summer geography
would need to be bulldozed to
provide ramp also blowing pierhead
would ease conditions

Ships lay off at 50 fms
Steam out into Sound in
gales to avoid drift ice
Ice melt few streams would have
to build reservoir dam.

Area B (cont)

Site 3 Hope Bay, New Pt. Duse Bay

Difficult access in summer
rarely does ice break up.

N.G.

a/c no good because of direction
of prevailing wind

Only good in summer + for summer
stat. for which
I see no point

except a south side peninsula

Area C Snow Hill (Swirly snow free)

N.E. For land biology good marine not
Mar. res. difficult to at Good^{so}

Times. very dry little water
Is. Dry area good for air craft.
Not much hot water

Area D

Amvers Island

Strait

excellent central position for work N + S. along coast. of Palmer Peninsula

Site 1

Arthur Abr.

I

Need

floating type pier + roller tracks

good a/c. all kinds.

Great variety of coll. grounds within reach must be health of marine life.

Good central for Birds + seals.

Room for slipway

good anchorage off shore.

1/4 mile to lake

1 mile to medians + planes

D.2 account

Melchior as secondary

summer base

see section III of report.

Difficulty in getting stuff named

Kane from Gloucester Pt. hab.

Same old story

has assurances stuff will be worked up

de Gerlache Strait

no a/c landing Port Lockroy + Dorians Bay No aircraft possible, No!

Area E

Brandidier Channel

Out for
this
reason

a accessibility, uncertain from
year to year.
also need flashing pier =
lot of crab enter seals

Investigate further by helicopter
Doubt if any thing here that would not be
at. Invers (? crab enter seals)

Area F

Marie Darbel Bay
Not suitable, Ice Pad!

out

Area G

Adelaide Island

Agree with \pm adverse report.
Uncertain ice and tides
in Margarete Bay
not so good for Flora + Fauna

out

Falklands: Karl Vernan Hellman
Greenshield
Feldons

FALKLAND ISLANDS



TIERRA DEL FUEGO

DRAKE PASSAGE

60

SOUTH ORKNEY ISLANDS

SOUTH SHETLAND ISLANDS

Area A

BRANSFIELD STRAIT

Area B

Area D

Area C

Area E

Area F

Area G

ADELAIDE IS

MARGUERITE BAY

PALMER PENINSULA

CHARCOT IS

ALEXANDER I

Palmer Peninsula

Selected Areas of interest.

- Area A. South Shetland Islands
- .. B. Hope Bay
- .. C. Snow Hill-Cape Longing.
- .. D. de Gerlache Strait.
- .. E. Grandidier Channel.
- .. F. Marin Darbel Bay.
- .. G. Adelaide Island.

70

- ① Broad wide area.
- ② Don't be influence by presence
- ③ Continuity + new; don't
- ④ of value over long period
- ⑤ Availability for air service

Geol. physical 20
 Geological 20
 Bish. — — 50 yrs



1st year small way.

Lab. site No. I

Utilities = Elect - generators - fuel
 great quantity of fuel oil.

pipe line
 (easy to deliver supplies)

⊗ Fuel system serious

Drums over tanks
 Matter of delivery
 Drums ashore

Straight collecting.

IF to be expandable
 out fit

Do not ask scientists to
 work shore snow, or run
 generator
 Civilian support.

→ 3 times, anticipated
 needs for elect.

⊗ Water supply;

Ice cliffs (house)
 melt snow
 banks get exhausted
 by use (mining snow)
 McMurdo snow melter works best.
 Thermoglass pipes.

Civilian support
 ashore; Navy for
 supply

Air People 3 year
 stint; need
 Sect of defense.
 to arrange 3 yr.

⊗ Find a place with ice supply close hand
 Deep-lake - but not saline test
 10 feet deep or more.

Samples of
 standing water.

Biol. lab. distilled water supplied. for lab. + coffee.

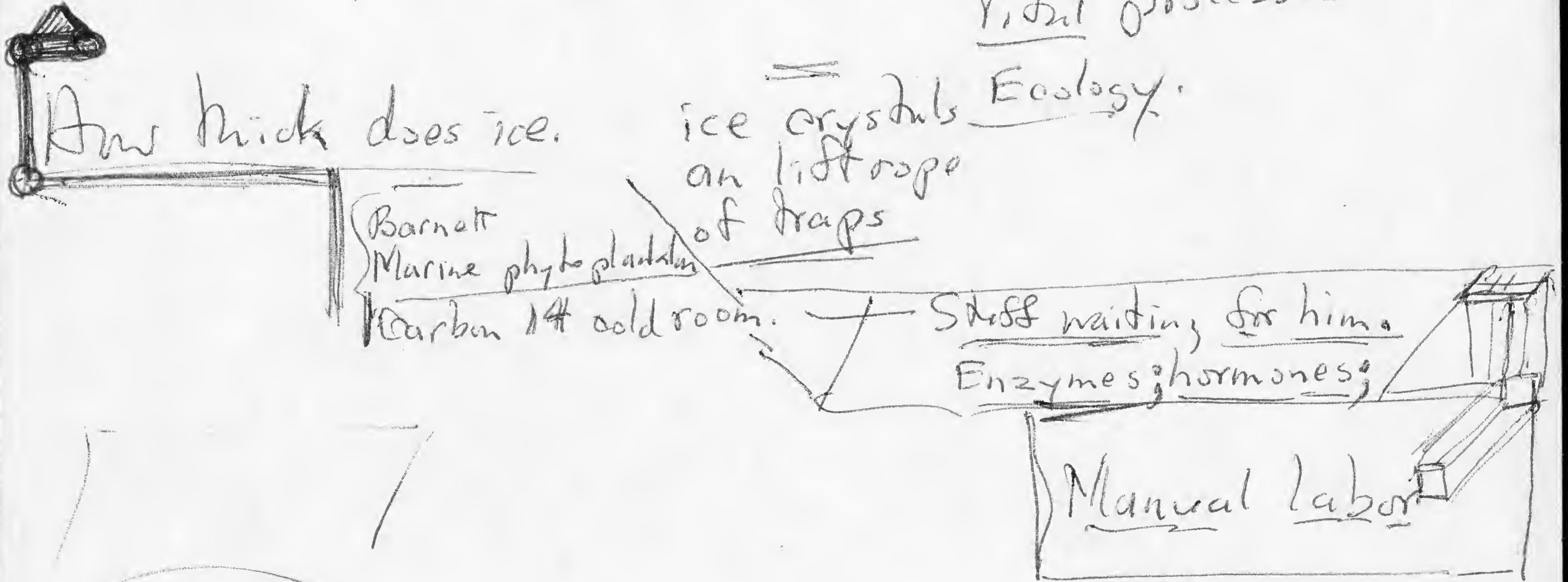
⊗ Salt water hauled in tanks; stored in containers
 under aquaria

① Biology manual; repeat instructions,
① McMurdo projects can be profitably repeated +
checked by doing over

② Transects:

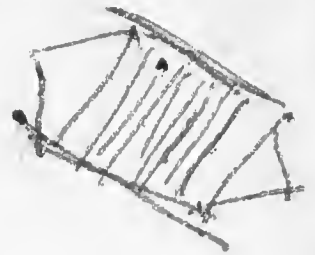
Follow through seasons
} Photosynthesis under ice
} Open ice.

Tidal processes



Ask for inventory + facilities, available. See Goodall ➔

Water systems water drains dam hill



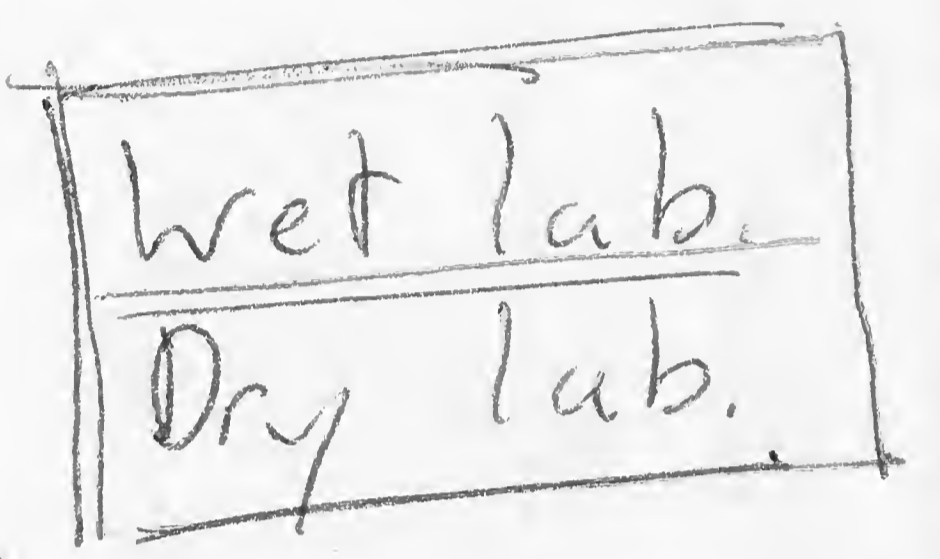
⊗ Drainage!!! be sure its there.

→ Building in row following contours
End of utilities Dry-buckets of "dung" honey-buckets

Syst. coming to close.

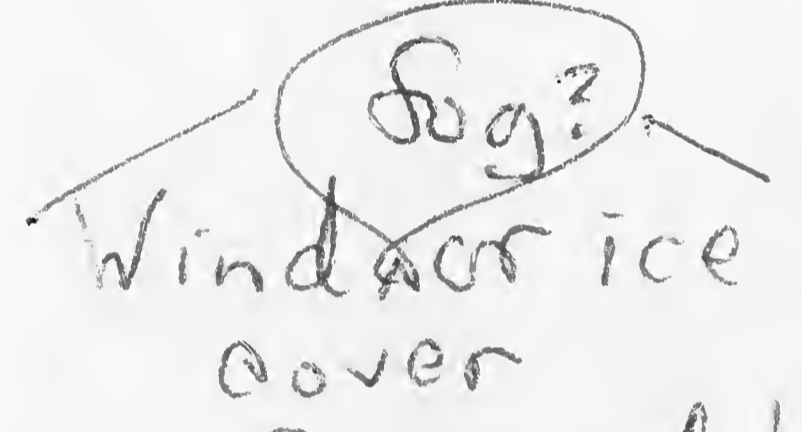
disappointed in medical

Physiology Scholander + Irving



Keep scientist out of routine work.

What to look for in selecting site.
Use of small boats.

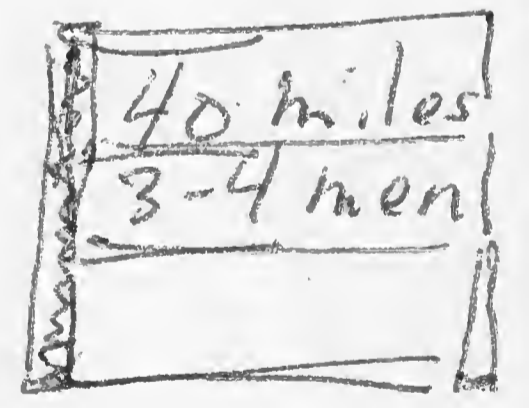


Spring Summer Autumn + Winter

Beaches [Shingle gravel] rock-cobble-type, ^{rough} rocky headlands. [Scuba diving], tide-pools,

Kelp. (resistance to freezing) Wind ex

Swampy - dry - wet.



Ice-houses: (oceanographic work, ideal for)

Boats - one-man - winch, frame for dredge

7th Continent "Quest for a continent", Walter Sullivan
Secker & Warburg, London 1957 30 Shillings
Martin Secker & Warburg Ltd. 7 John Street, London W.C. 1,
(Set book)

German raiders based on Kerguelen Ids

p. 266 "Of immediate interest to the combatants were the waters near the sub-Antarctic islands and the long arm of the Palmer Peninsula." "Here the German raiders could seek refuge, rendezvous with their supply ships and land their crews for recreation. A bleak and rarely frequented harbor in France's Kerguelen Islands was their chief haven."
German sunk or captured several hundred thousand tons of Allied shipping

p. 268 W. J. L. Sladen Nov. 8, 1948 Eagle House burned down.

p. 270 Green House on Stroming Id. (Then soil from Falklands, now could do hydroponics culture)

Mr. 12, 1947 Finn Ronne turned up.

"White Horizon", Douglas Livessidge, Odham's Press Ltd.
Long Acre, London

28-29 Jan ^{x 70} Argentine Island

Add Berthelst Id
Cape Tuxen
Winter Id

30 }
31 } Briscoe Island *
1 Feb }

16 Days bad weather

17 Melchior Island

Add:

Cape Anna

Feb 9th { Svend Foyn Hbr
near Cape Anna

18 } Paradise Harbor } Add
19 } Dorson Bay } day for
Dorson

Feb 9th { Auguste Id
mostly snow free

20 Snow Id.

Cobalescow Islet
penguins

21 } B. O. Higginson

22 } Roque-maill

Roque-maill

10th } Brailmont Cove

23
24 Hope Bay

25 }
26 } Snowhill
27 } Seymour } area P
28 } Eagle Islet } O
28 Feb }

1 travel

2 Deception Island

3 } King George Island
4 }

5 }

6 March Dep. for Valparaiso