

Geological Specimens

From 2864 — 3742



C. Darwin

MS. DAR. 236.3: ff. 1-45
Covers loose & separated f. 22 loose -
between ff. 21-22
Foliated 2015 November 17

Front Cover



DAR 236:3.

[1]

Red = 1000 + —

Green. = 2000 + —

Yellow = 3000 + —

Specimens sent to Dr. Brown

1575

1975

2348

2597

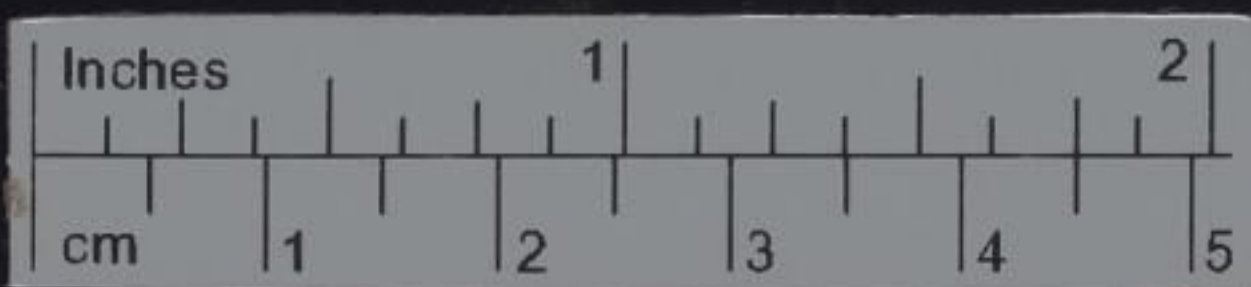
2704

705

06

3092

8 specimens



- the layers, have an almost ^{green} ~~cryst~~ ^{plastic} stone: can fuse with
67. at least to ^{some} ~~longer~~, above small: some of
68. passing into character of indurated shale
69. ~~which~~ ~~appears~~ ~~green~~ ~~fibrous~~
~~note~~: parts approach charact of Home
Stone: as if baked & ff
74. Would not mudstone be good name? ^{difficult} ~~possible~~ ^{with}
76. Describe the genus. as mudstone
70. with Blowpipe can scarcely perceptibly ^{point} ~~fract~~
72. infusible
74. ~~Clay~~ Home ff not others to long
69. extremely hard. steel not touch, ^{point} ~~fract~~ ^{with}
case into white enamel. - then ^{series} ~~series~~ of layers
a whole substance passes into bright
green, decided crystalline work. which
may be exposed to compact ^{quartzite}
74. small embedded ^{cryst} ~~cryst~~ ^{appears} & wide ^{fine}



- 1835 Valparaiso - Coquimbó 2
- 2864 White imperfect flint. No much green ^{from Mass.}
- 65 Micaceous Iron ore
- 66 Green-colored ^{fine earth} slightly indurated Argill. Calc. Stone
- 67_x Laminated ^{white} (or 'tinny') greenish partially indurated ^{slightly} Arg. Calc. stone. Laminar even ^{Clay State}
- 68_x Do do more indurated passing into chert of
- 69_x Very hard compact green. Laminated Porcelain R. containing Calc. matter in lines ^{Clay State}
- 70_x Black. Very hard, uneven splintery fract. Siliceous Calc. ^{Sp. 1}
- 71 Do, softer. More Calc. threads of brown. Calc. ^{Sp. 2}
- 72 Do. with even fracture
- 73 Do. with some shale patches of substance like siliceous Pisolite
- 74 Yellowish-green. compact fine grained. ^{leaky} ^{slightly} ^{feel} fracture sandy ~~Aluminous~~ stone non Calc.
- 75 Do. rather coarse grained, slightly laminated, non Calc. specks of mica
- 76_x Compact brown. ferrug. Calc. ^{mill} ^{when} ~~Aluminous~~ Siliceous Stone
- 2877 Light. Calc. particles & other ^{when} ~~extensive~~ embedded in whitish Aluminous base with ferruginous matter; not very hard



90 white opake scar of cyp. t. Lebanon.

granular with very pale green chlorite
lunules & few small minute scales of
stony mica

91 compact Clay. Stone.

2881/1. Measurement p 8

2882. V ——— p. 9

2896 ————— p 12

2897. { Tr. Miller says it consists
of Carbonate of lime & peroxide
of iron. —

1835

2878

-79

-80

-81

-82

-83

-84

-85

-86

-90

-91

-92

-93

-94

-95

-96

2897

X parallel.



3

1835 Valparaiso - Copiapo

2878 Rather harder, carious siliceous ferrug. Alum

- 79 Clean (dried) soft. Calc. Alumina etc. (Iron etc.)

- 80 ^{Deep} Greenstone. Fr. yellowish. unequally distributed- 81 ^{Greenish} x Do. whiter, white Feldspar. partially ^{constituted} feldspar chief

- 82 Bright pinkish white. Fr. green. Horn. base (grain of quartz?)

- 83 Apparently vein of quartz associated with gypsum
Copper Pyrites & the greenish Alumina. etc. etc.

- 84 Carious quartzon. etc. with much light red

- 85 same as (2867)

- 86 89. Siliceous hard, grey color; 89. ^{mottled} grey & black- 90 x White ~~quartzon~~ rock with numerous
light green specks of Hornblende mineral

- 91 x same as (2862) without any Cr. & Fr.

- 92 Purple Claystone. Porph.; Feldspar; small, very numerous
irregular speck white Cr. -

- 93 Base, quartz & decomposed Fr with silver ore

- 94 Ferrug. quartzon R. with Cinabar

- 95 grey. hard. ^{with granular iron} Cryst. base. with Pyrite? & Do- 96 x Blackish-green base with numerous ^{blackish Fr} elongated Cr.2897 granular mixture of Carb & Lime & Silica
parallel. threads of ^{crystal form.} latter & specks of Iron



~~2900~~ ~~Quartz lost~~

2899. sig. brilliant aggregate of ^{small} cryst of Carb.
d lime. with few grains of quartz.

04 easily fusible. - ✓

08. No exception for grains hard to make
out in gradients but the facets of felspar
are sufficiently manifest

03 H. thinks ~~that~~ ^{but such are} quartz grains should
be examined; ~~the~~ present
in this specimen ∴ consider it either
a singular rock; each grain is a more
or less perfect crystal: -

2906 V measurements p 10

2902. V ————— p 13

2902. Miller sep carbonate of lime & facnet

1835

2898

2900

01

02

XX

03X

04X

05

06

07

08X

2909



4

1835

Valparaiso - Copacabana

2898

¹⁰ White granular. ^{with some sand} Cryst. str., chiefly Carb. of
Lime, with little Quartz

2900

Bluish shaly siliceous. ^{Clay like} ~~stone~~

- 01

Compact hard green. Feld. R

- 02

Very same as (2898) grains much
coarser, the hard ones, being much larger

- 03x

Trile white, almost pure. granular. ^{Lime} Carb. of

- 04x

Grey hard compact ^{siliceous} stone, with
minute quantity of Carb. of Lime in interstices

- 05

Partially granular or compact mixture as before
(2903) with angular bits of very compact pure
siliceous. ^{Some} sort, which projects weathering
in singular manner & can only be just perceived

- 06x

Pale pinkish white flinty & speckled with black

- 07

Very fine granular siliceous ^{very} (like sandstone)
thickly studded with most minute speck of mica

- 08x

Is rather coarser & mica in obscure lines

2909

Dark col. basis, with clay & large polyhedral
Cryst. of glassy F. & others of green mineral



301a most remarkable rock, almost
composed of the cores, many of which have
been filled with white cryst. calc matter.
the piece which I supposed I feel no
doubt is correct. -

V. App. 17

2912 V. Measurements. p. 9

2932 ——— do ——— do.

2933 V ——— p. 10

1835

2916

11

12 X

(D. Can)

2924 : 2

2928

- 29

- 30

X

- 31

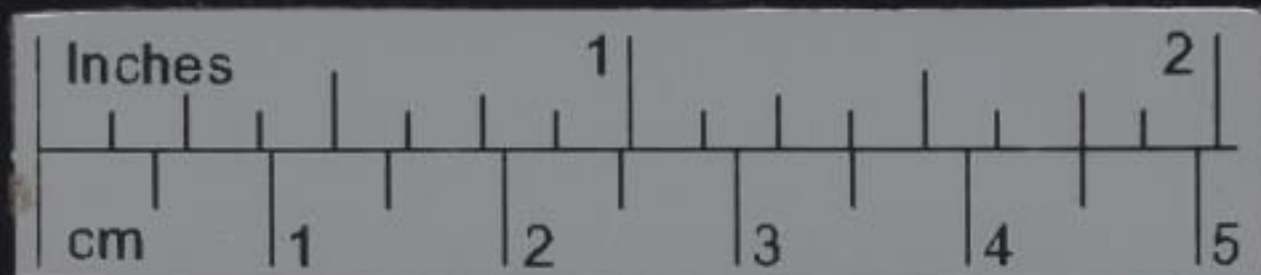
- 32 X

- 33 X

- 34

35

2936



1835

Valparaiso - Coquimbos

5

2916 Bron. Copper Pyrites

11 Black Cryst in Quarry school?

12 X White fd: & glassy fr with much pale green
cryst of imperfect Hornblende

Dr Carpenter Coquimbo

2924:25:26:27 Shells in Jorca rock

2928 Jorca rock ^{layers, water lying} rather perfect smooth Horns.

- 29 Dr. white ^{finer} more calc. not so compact

- 30 Coarse mixture of bits of shells, tiny ^{fragments}

X + many hollow cavities of C of lime; perhaps

fragments of shells, acted on by water

quarried for freestone, called Losa

- 31 Large irregular lg of Hornblende with
little white opalescent Feldspar

- 32 X Hornblende & rather glassy fr. ^{cryst} confusedly

- 33 X Do rather more granular

- 34 Thick-edged hard basis ^{part} with few

large do colored br of fr & ^{of Hornblende} numerous

35 ^{half} Purplest Feld: base, with brown lg of ^{fr} green

2936 Red. fine grained, but not very compact
sediment. deposit some ^{extraneous} particles, &
^{particles} of C of lime



46. edge can be touched with blow-pipe
937 H. thinks all these metamorphic
and decidedly more crystalline
than sedimentary: thinks we
send layers of paper into the mica. —
even 3608. from Copiapó. thinks
crystalline

2937. 38. 39. 40

see back of page 14

1835

2937

X

-38

-39

-40

-41

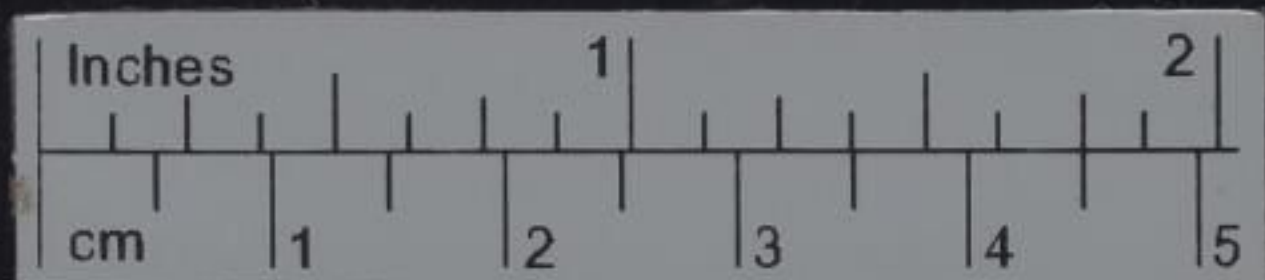
-42

-43

-44

-45

2946



1835

Cosquinto

6

2937

Small Cyst. of white Carb of Lime & red

X Cyst grains of Oxide of Iron? imbedded in bright green moderately hard basis: almost a granular rock in appearance.

- 38 Do, duller green, opaque Cyst of Lime

- 39 Brecciated mixture, cemented by Lime of bits of red sediment & bits green stiff opaque mineral

- 40 Mixture of paler green Mineral & Carb of Lime as (2937) interstratified with Silica & Mass of Silica

- 41 Pale purplish brecc: sediment bed (most of pieces of nearly same nature & some few greenish & Cy. part of Carb of Lime

- 42 Harsh, cream edged base. Porph with flash few colored Cy. of Fe - extensive fragments Silica ore

- 43 Sulph. of Bayles, partly stained & containing Silica

- 44 Compact, even fract. pale brown aluminous Limestone with Cy of C. of Lime

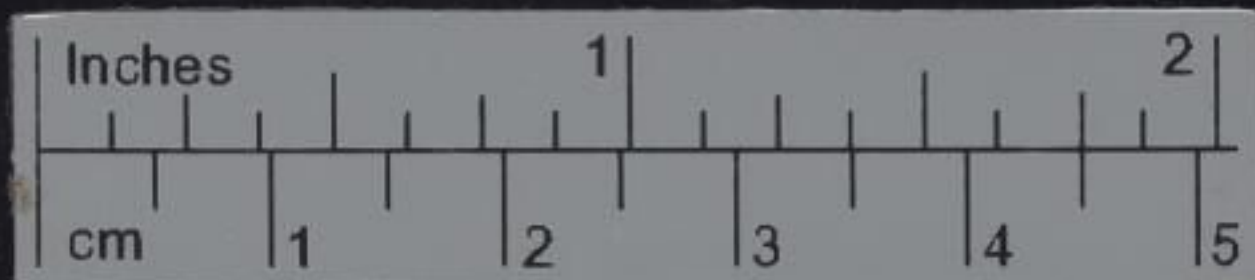
- 45 Do. with petrified Corals

2946 Black. Compact. conc. fract. Calc Clay - Stone.



- 48 more like indurated shale.
- 49 Earthy conch pattern. Also small
sedimentary rocks
- 50 approaches character of sandstone
excepting that I understand nothing
of this term hard & with clearly
visible grains. —
- 51 perfect character of basis of many
claystone porphyries: pure unad. white gls.
- 55 struct. like silicified wood
- 58 most extraordinary angular conch.
struct. color green, sediment. strong
Adam shell. easy fusible
59. with small empty interstices & prismatic
nature fusible with difficulty
- 60 pellets not cellular; have a coarse sand to
fusible
61. rather a suspicious appearance

1835
2947
H
-48x
-49x
-50
-51y
-52
-53
-54
-55x
-56
-57
-58
-59x
-60x
-61x
2962
Couch part



1835 pure with dull enamel; is evidently closely allied. but fine grain to 874

2947 Yellowish brown, very fine grained, smooth
H soft Calc. ^{resembling} Bone-stone. Dendrit. Manganese

— 48x Grey much coarser, more Calc [7]

— 49x Ochreous yellow, Calc. fine grained, do

— 50 Red sediment bed, moderately fine, specks of Cryst of Lime

— 51x Purple, harder, fine grained even fract.
Calc. Sediment. stone; ^{matter} rich in Cryst. Calc

— 52 Do do on with more ^{large} particles of Cryst of Lime

— 53 Pale green, jaspery rock, containing irregular layers of black siliceous stone like Pitchstone

— 54 Brown ^{unim. semi-cryst. structure} carious Calc. stone

— 55x Siliceous stone, with some Calc. ^{Gypsum?} matter & sediment

— 56 Calc. Alum. fine grained not hard, milky fract.

— 57 Somewhat similar, with ^{extensive on fragments} small pebbles & pieces

— 58² White base with specks of green mineral
& grains of quantity of Basal Feldspath Cryst 29/

— 59x Pale green, compact Alum. non-hard stone

— 60x Soft Cryst. non Calc: ^{igneous rock pebbles} volcanic pebbles, with

— 61x Fine. Cryst green. Feld R

29 62 Compact. much fract. slate col. base, with
cryst. part elongated Cryst of glass Feldspar



64. meaning quite quartz ore
65. bright red. fine with different
white enamel. appears like Cleystone
72. When can these pebbles come from.

1835

2963

-64x

-65

-66x

-67

-68

-69

-70

-71

-72x

-73

29 74



1835

Coguinbo

8

2963 Impure. foliated, almost compact Fr
+ specks of green Hornblende. -

- 64x Fine white hard Sandstone (particles of ^{quartz})
united by white Calc. Matrix

- 65 Light brown very compact ^{Alum.} ~~Calc.~~ Limestone

- 66x Red, very compact, hard, imperfect Conch
frag; jaspery. Sedimentary R. -

- 67 Greenstone base with ^{minute} Cryst of Fr. -

- 68 Red, moderately fine grained ^{calcareous} + hard Sandstone
with scales of mica & broken Crystals

- 69 Pale purple; much harder + compact
particles ^{full of small fine} much more closely united

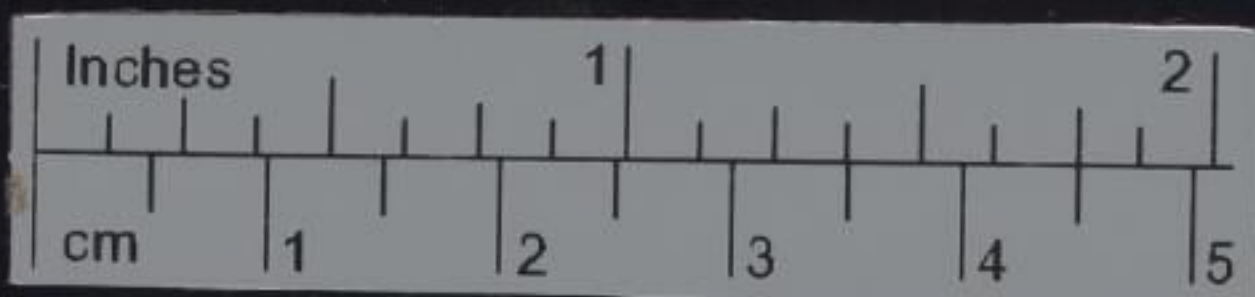
- 70 Coarse, pale purplish Sandstone. Calc:
^{a granite} cement, little quartz pebbles. ^{+ broken Cryst of Fr.}

- 71 Do, nearly white, very hard, blended together
Cryst of C. of fine, have made their ^{own} apper

- 72x Round pebbles of quartz in a white arenaceous
^{Calc. base}

- 73 Dull green, hard, not very fine grained
^{Calc} Sediment of minute particles closely united

29 74 Dull. red. Calc. Sediment (almost crystalline)
few extraneous particles



75. x Zedpa reddish? + ^{very} a few grains
of quartz

85 pale brown very hard. on or

88 looks more like sandstone &

V. App. p. 15.

2975 V. Measurement p. 12
(allbite)

1885

2975

x x

-76

-77

-79

-80

-81

-82

-83

-84

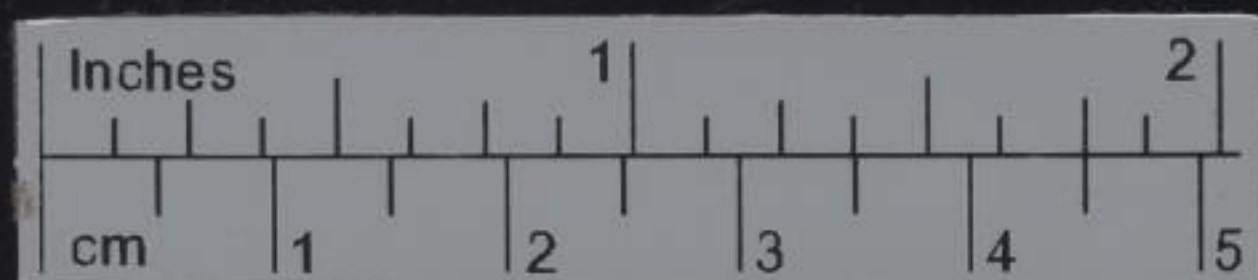
-85

-86

-87

-88

2989



9

1835

Coguinbo

2975

X X

Dull purple compact base, with some lines,
Porph with elongated & square Crst of red
Mineral, I think basic crystalline

- 76 ^{fusion} Pale green Fels P. containing imperfect Crst

- 77: 78. Siliceous Shells. R. Claro

- 79. a Quartz Vein, which has traversed Limestone with Orthoent. given me. ^{= Quartz} Crdill & Co.

- 80. Native Silver in Sulph of Barytes. containing
much Mercury. Product of Acqueous

- 81 Native Copper near Guasco

- 82 Copper produced by imperfect melting
Sulphur, like native Metals

- 83 Foliated (not very perfect) Fr open Hornblende

- 84 Greenstone

- 85 ~~White~~ laminated aluminous ^{siliceous} limestone.

- 86 & darker col: more Crst. Structure

78

Capiapi

- 87 & Black Calc. compact coarse Clay Slate

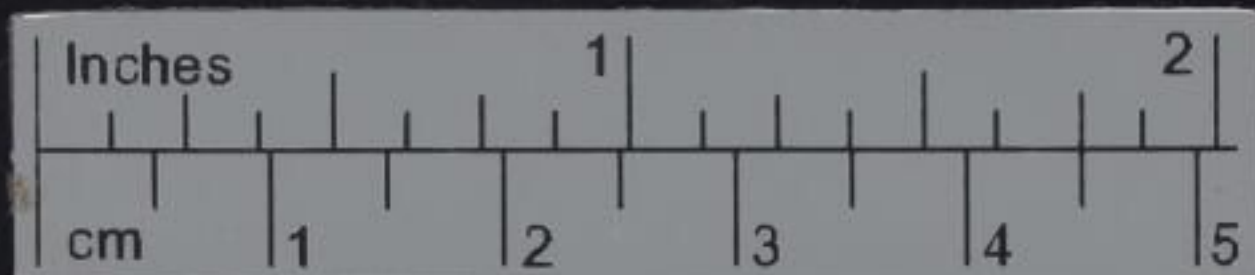
~~88~~ Hard, compact, pale green. fine grained ^{Leipnitz} hornblende

2989 D. coarser, purple, different sorts of particles
& visible grains of C. & Lime



- 91 easy fusible. mottled, $\therefore$ not siliceous
94. like vein stone. small cysts of quartz
in cavities.
95 fusible. V. App. p. 15
96. enggd. with innumerable small white
bubbles. lined with bright verdigris
around earth. filled either with white
grains of lime or yellow mineral which
translates Epidote? - Some cavities
entirely filled with this mineral.
97- filled with little balls of the dark
greenish brown earthy matter.
99. ^{very few} white angular patches of opaque felspar
appear to show tendency to Porphyroblasts.
3000. part. conch. & eiding sharp edged
flat splinters. -
998. conchoidal. part. greenish grey - glassy - crystalline.
Shells. marked one of clay to pt. 7. - Black
points which open like hornblende
There are also yellow grains, few minute
as if of Olivine?

1835.
2990 Comp
fine
- 91x. Sil
- 92 Sem
- 93 Lin
- 94x Can
- 95 M
angular fact few
- 96 Dul
V
aph
p. 15
carb
- 97. Bro
X
- 98 Re
may
2999 Pale
X Sh
3000 x 20
3001.....



10

1835.

Capiapi

2990

Compact. dirty green, conch fract, tolerably
fine grained. Calc. Sediment; ^{blended together} altered +
^{together}- 91x Siliceous ferrug. R. apparently particles ^{blended}- 92 Semi-indur ferrug - Alum. stone (off) dendritic ^{masses}

- 93 Silice white, more indurated Alum. Stone

- 94x Carb of Lime with ferrug. matter, ~~carb of iron?~~

- 95 Mottled green & purple, compact, hard.

angular fine - sedimentary. Iron - Calc:

- 96 Dull red, Basis, ^{dark brown} apparently Porph. with someelongated ^{spiky} Cryst of Fe : very amygdaloid cavities

all lined with green, containing white Cryst

Carb of Lime & yellowish mineral

- 97. Brown ^{mottled} confused base with ^{few crystals} various confusedX minerals - ~~I suppose crystalline~~- 98 Reddish brown confused, fine-grained, ^{highly} Cryst

mass. I believe some of feldspar.

2999 Pale purple hard conch fract - base. Cryst

X Structure not visible - but not like sediment

3000x Do with scattered Cryst of yellow & green. F

3001..... 3011. various Porphyry.



3021. Numerous fragments lying about in all parts. —
12. must be direct tuff
16. Repeat sedimentary? portion appears very crystalline. V. app. p. 15. —
17. with less. mottled colour can yet be seen. — mudstone
18. as compact as any limestone, yet contains but a small percent of lime fragments such as those described in detail on p. 16. — ^{all conglomerates} such I believe
21. of extreme easy friability; (like an altered rock - ff)
19. Calcarenous spar. with some iron & Aluminous matter. not magnetic either before or after, yet gives blue. with Puff & Potash. — easily soluble in cold H. Cl.; Caustic. but does not whiten under B.P. —
From washing in effervescing probably no magnesia

1835

3012

X

13

14

15

16

X

17

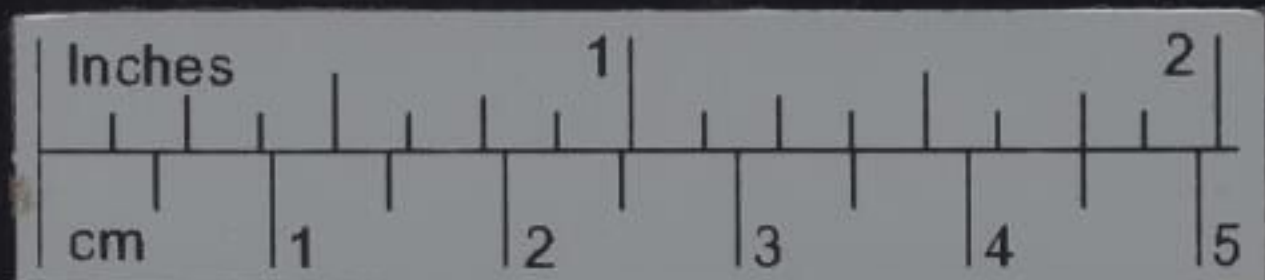
18

19

20

3021

3022



1835

Copiapo

3012

x

White, hard, Alum. stone with small pebbles, broken Co of Fe + scales of mica

-13

Pale brownish purple; conch. fract. Filled with irregular Cr of Fe

-14

Aluminous gypsum. impure cerious

-15

Do: a stalactiform Carb of Lime - Layers

-16

Dull colored fine mixture of various sized minute particles, compact, hard, even fract

x

Blended. Calcareous Sedimentary(?)

-17

Do still finer grained approach to Clay State

-18

Brown, compact almost conch. fract. Calcareous

x

In some parts I think shows aggregated structure

-19

Light brown spar, shaly fract. hard

-20

Compact-hard, semi-conch. fract. Breccia

x

not very small, & partly made of Porphyrus & Cryst grains of Carb of Lime. -

Iguigae. Peru

3021

x

Greenish Calc. hard. very compact, semi-conch. fract. Shows porcelain R: layers, diff. hardness

3022

White Cr. Siliceous Calc. R. -

in part siliceous.



3041. Pale. dull purple. Cryst Feld. B.
slightly laminated with very minute qtz & g.

29. red. fine grained, very crystalline
calcareous sedimentary rock, the
lime though in small quantity has
been sufficient to give whole rock
cyst strand. - with threads of ^{white spec} cyst

32. infusible

35. ~~dark~~ brown. hard strong rock. arising
mixture of broken cyst. of ⁱⁿ ~~dark~~ brown
earth ~~partly~~ ^{partly} with ^{marked small} fragments of shells, ^{marked}

36. crystalline - looking fracture

43. approaches to character of Hornstone,
fine similar to them in composition

partly same as 2867.

35. brown fine grained mottled, ^{set black mass} ~~and~~ ^{per. the}
beside small fragments. grains of g. & or
glittering grains of black oxide of iron. so that after
B.O. whole rock magnetic

3039. — Taniz is reddish
in mines —

1835.

3023 Pale
sedi

-24 Do

-25 Comp

-26 Bri

-27: 28

-29 Pale

Jan

-30 Dar

-31: 32X

-33 Lar

-34 Pale

-35 Black

ma

-36 Dar

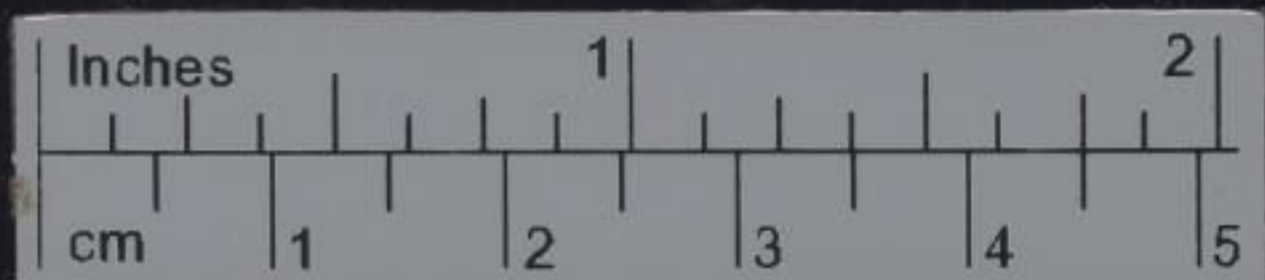
X
in pure Calc

-37 Very

-38: 39:

X
So 42 Lar

X
with



Feb. 11.

1835.

Iguine. Penn

12

3023 Pale yellowish green. fine grained, Calc.
~~sedimentary~~ sedimentary R. water lines

- 24 Do more compact. more Calc, sandstone

- 25 Compst. Black Calc. Clay. Hols

- 26. Brownish ^{cross grain} ~~granular~~ greenstone, ^{with iron + Mn} ~~impure~~

- 27. 28 ^(Faint) Yellowish ^{fine} layers of Salt & sand ^{mother} Alumina

29x Pale purple. Calc fine grained. aluminous
Sandstone - or a Limestone

30 Dark red, brown (non calc) fine-grained sandstone
fine grained.

— 31: 32X pale brown slightly Cate. Sandst, compact

- 33 Laminated white ^{hard} coarse sand, the

—34 Pale ^{Brown} ~~Black~~ Limestone in pure

— 25 Black sedimentary shale. Brecc. structure,

marks of shell, & the small one

— 86 ^{crystalline} Dark brown. Conc. fract. Specks of quartz in
in pure Calc. base & ^{claystone} like a ~~flint~~ true

37 Very pale purple, laminated Alum. Limestone

38: 39: 40 3 shells. Litra mix. of Huastepa in above

30 42 Laminated. Aluminous, ^{hard} thin. hard greenish

with dandit. Mangam. & Kuru.

Sept 17



42. pale brown pebbled lava chips
3rd of 7.

68. Mark. not head. fine granular
Opisthion mixture of mica &
probably felspar (& quartz?) -

53. granular sulphate of lime.

3045 consult appendix p. 19. back of ref

49. Strong earthy shell. Small angular bits
of rock. crystalline gypsum imp.
pale brown color - carious.

3067. V. Measurements ~~E. 1/2~~ //

3053. Miller says gypsum - after
hard & some to

(w) c granulo - saccharine form)
c. D

658
059
060
061
062
063
064
065
066
3110

1835

30408

-44

-45:46

X

he

wh

pu

-47. wh

th

-48

-49X6

-50:51

can be

52

53

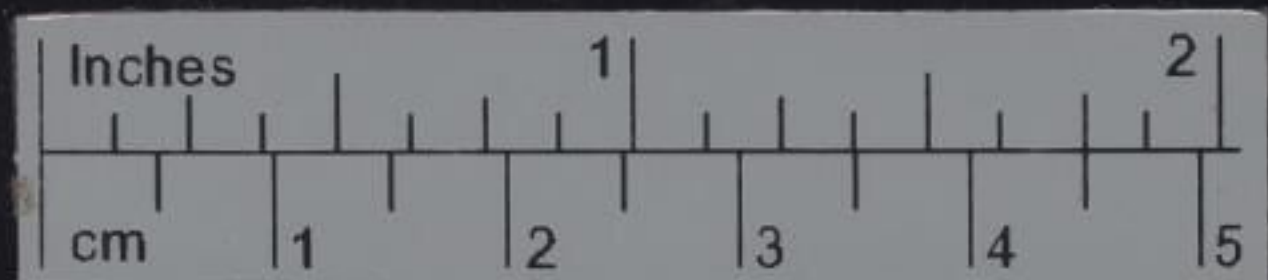
-54. h

3058

-67X

3068

X



1835

Iguazu

13

3040x Lava. white felspar: & green feldspar

- 44x Wood dug from beneath earth, slightly altered

- 45: 46: Hard. even fract. n.m. lvs. brown
beccia Onclaii rock, veins & patches snow
white, surface furrowed with white
pulverulent substance

- 47. White pulverulent substance, called Pica, contains
the above constituents

- 48. Is less pure <sup>white, dirt, sand, with little particles of
rocks, base white gypsum? with
little carbonate & lime</sup>

- 49x Carion. beccia. Gypsum? n. lvs. Alluvial

- 50: 51 Salt. hard. opaque. n mixed with sand
sandstone n. from Alluvial covering
^{red sand, with some carbonate & lime}

- 52 Earth with deliquescent Salt

- 53x Indurated Salt. layers at Pizap

- 54. Nitrate & Mass of Soda, (same as in label 1227)

Copiapó.

3058-... 66. Fossil shells. las Amolanas. Copiapó

- 67x Fine granular white part: For. F. specks of
stony mica - Hornblende & Chlorite?

3068x Soft black stone, small black mica
holes & little green: Quartz?



3083 Dull black compact (cyst?) base: with
few red cysts of which some appear reddish

~~3078 To I believe a limonite with
broken shells - 3078 is 72~~

69. easy fusible

73. brown limonite with very irregular fracture
almost composed of fragm. of shells blended
together. -

82 with good cyst of 7 & humulide

84. with few of 8 & 9 of 7. & scales of mica

78. base. appears crystalline. porph. with numerous
small cyst of the red. Hydrous peroxide
of iron - but I see no others. (What
I should suppose nature built for)

3080 . v. measurement p 10

3081 _____ p 20

3071 _____ p 12

1835

3069

-70.

-71x

~~72~~

x 72

13 74

-75

-76

-77

-78x

-79

-80x

-81x

-82

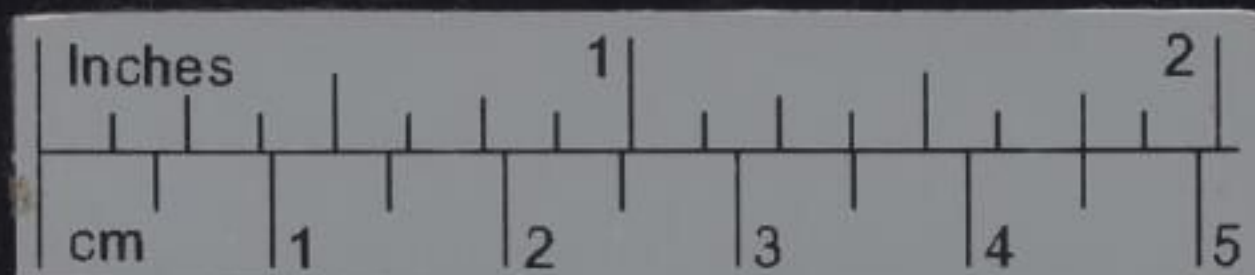
-83x

-84x

-85

30 86

+ next number



1835

Copiapó

14

3069

Dull red. Calc. Sands tone

— 70.

Black ^{porosity of lime is small} conch. fract. Calc. - Clay. Slate

— 71x

Pale green base porph. with large many Cyst of
~~feld~~ & black Cyst.

X 72

Small white ^{compact} Cyst of opake F. with pale green ^{mineral} earthy

73 74

Fine grained hard. white (non Calc) siliceous. Sandstone

— 75

White Cyst. opake. Quartz R. even fracture

— 76

Black. hard. semi-conch. fract. silic. - Calc. ^{Clay. Slate} Stone

— 77

Coln mottled; uneven fract. ^{Calc. base.} sedimental particles in Cyst

— 78x

Compact, even fract. dull colored base. porph. with
few small red Cyst

— 79

Dark clark purple. irreg. conch. fract. Compact
Semi-Cyst. ~~stone~~ Clay-stone

— 80x

White semi-fs F. with Mica & Chalkite

— 81x

^{Hornblende} Green. Mica: Chalkite: base, with few Cyst of F.

— 82

Lilac purple Cyst. ~~feld~~ R. ^{mineral} Claystone Dark

— 83x

Dull purple. semi-Cyst. base. amyg. with opake

— 84x

Lilac rather earthy fract. (hard Clay-stone)

— 85

Dull purple. ^{alginate} semi-Cyst. base. amyg. with opake ^{soft mineral}

30 86

Brown base full of small yellow (X-ray?)

+ most numerous. red Cysts of - V. App. p. 20



87. I am loth to call them sandstone
for though there is an appearance
which would indicate sedimentary nature
yet no distinct aggregation can
be perceived
88 can be scratched with knife. Also small,
particles of mica & broken crystals. - I do
not understand nature of Base -
it is easily fusible
89. easily fusible irregular angular ^{few scales} particles. ^{masses}
of black ^{micaceous} quartz. There is an appearance ^{as if} in few
places becoming porphyritic with white ^{smaller than} ^{thick} ^{streak} ^{like Fe} ^{mineral} ^{when}
90. ^{part} ^{the} easily fusible. excepting points. I
presume broken fels. particles crystals
91. ^{part} ^{the} same as 2021. except from
porph: crystals. -
92. pale yellowish brown nearly pure, brittle
103. strong at base to tongue. earthy fracture.
easily friable under fingers, easily fusible
02 easily fusible. white glass. -
89 the base may be called almost crystalline
- the ^{green & red spots} ^{concretionary}. I think very
doubtful whether sedimentary or igneous. Metamorphic action

1885

3087

-88x

-89x

-90

-91: 92.

-95

-96x

-97

-98x

-99x

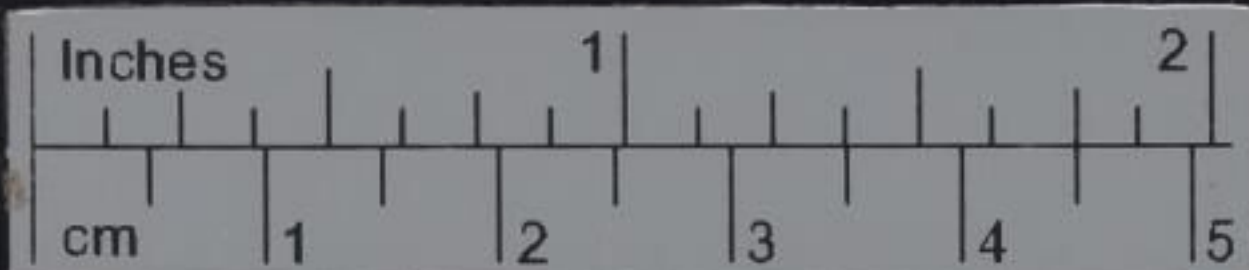
3100

-01

-02x

-03x

3104



15

1885

Copiapó

sediment deposit

30 87

Red. earthy part, non calc. fine grained.

-88x

Compact sandstone, particles cemented ign
yellow. non calc. paste, minute round pebbles

-89x

Very compact. various colored. red. green &
particles. almost blended together

-90

Pale. red-purple ^{strong} base, purple. with ^{numerous} Cyst & F &
little nodules of Quartz

-91: 92: 93: 94. Black. completely silic: wood

-95

Red ^{earth} particles cemented together. with ^{minute grains of quartz} for
Cyst. Calc. ^{matter} particles. Sandstone

-96x

Do, a shade coarser (not so harder, compact)

-97

Bivalve. in pale red. fine grained. Calc sandstone

-98x

Pale green, most compact, smooth part
Chert stone, with few obscure Cyst & F.

-99x

Compact. hard. Green: part silicified? Limestone

3 100

Dull colored ^{slightly impure} Limestone with ^{do} ~~little~~ ^{copied}

-01

Do. granular ^{cryst.} structure. Limestone Aluminous

-02x

Dull green. hard, pieces of Hone stone

-03x

Pale purple, Calc. Alum. rotten stone Gypsum ^{veins}

31 04

Green. ^{cryst.} ^{cryst.} Zirconite rock
Wine



74. full of broken eggs. chest deep pelican

~~Horrell~~

15 scales of mica. + broken eggs of
J. -

3113 then measurement 90°
within 15'. no doubt pelican

3112 Cannot measure pelican - appear
white like alabaster. Black crystals
 55° . - Horrell

1835

3105

fauli

-06

-07

-08

-09

-10

-11

with speckled

-12

-13

-14

-15

-16

-17

-18

-19

-20

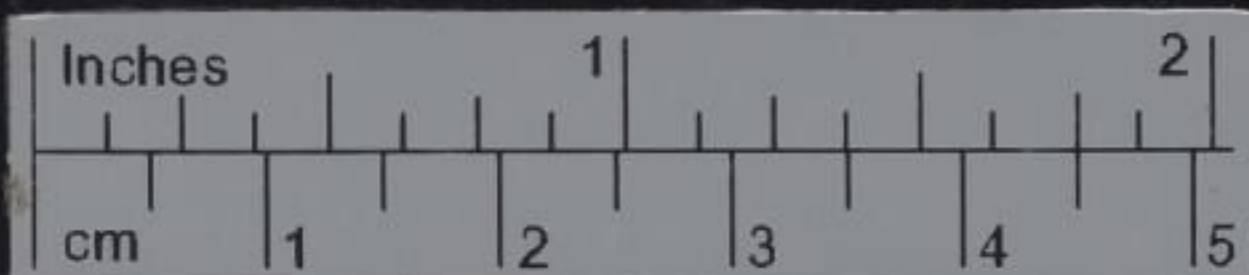
-21

-22

-23

-24

-25



1835

Copiarò

No

3105

Do, State colored. with little differentiation
of the fulvous can sometimes be seen
on the crown. On the nose.

— 06

Sulph of Copper + Lime in Sulph of Iron. +
 yellow Cyst in Ochreous base

The bright yellow Cyst. -

Gypsum & white sol: salt with off from ^{base}

Fine yellow soft ochraceous base

Compact, conch. fract. ^{siliceous} cream colored base. Porphy-
 red with lignum ^{part. decomposed} brown spots
 with few imperfect Cyt. & dendritic regular

Moss of white Cyst of F with black Cyst

Buck and base; pink numerous irregular

Cyst or patches of Feldspar

Pale-purple Tufa broken ^{& crystals} granular

Very light pale Lilac Tufa, fine grained,

straight, fract. sonans. extraneous particles,

Black ^{slaty} bone with Mang. & square Cryst. ^{4 plates 4}

²⁰⁰⁰¹ ^{clayton.} ^{can't}
Pale purple base, uneven fract. Porph ~~imperfect~~

Cryst. ^{11.8.9.} & some exaneous bits - Lava?

31 18



120 Porphyritic structure of a little less
clear produced, fragments Porphyritic,
distinct, yet blended together. —

22. I should rather think incline to
sedimentary rock. —

red
faster
color.
Bright saddle red. composed of crystals
facets of calcareous matter containing
some iron (known S. purp. Blue. yet
not magnet. become caustic. though not
whitens). with patches of agate. &
concretions irregular masses of a
pale green. (as if colored copper) Calc
compact rock. resembling a limestone
& containing some lime, but fuses
readily into pale brown glass. & therefore
more allied to a felsitic nature
can be scratched with knife &
not effervesces so readily. as 3019. but
yet readily. —

3125 p. 13. (Humboldt)

1885-

8/19

-20x

-21

-22

X

-23

-24

-25

X

-26

-27

3/28



1885-

Copieps.

17

3/19

^{small}
~~phosphatic~~ with ^{cryst of Fe} with fragments
almost blended into each other

- 20x

to rather coarse (Cryst of Feldspar
appearing in Basis)

- 21

Fine grained ^{dark green} ~~greenstone~~ trap

- 22

Fine-grained. semi Cryst. Lench. part

X

heavy, slightly Calc. dark claret
color, sediment or Crystalline rock

- 23

Bright red highly Cryst. Carb of Lime &
Iron, which unites patches of green
Feldspar stone & nodules of agate

- 24

Sandstone coarsest debris of Granite R.
^{2. or 7. Cryst}
little pebbles. strongly cemented, no Calc.

- 25

Pale dull purple, bare (patches
differently colored, full of small cysts of
opal Fe & black G^l of

- 26

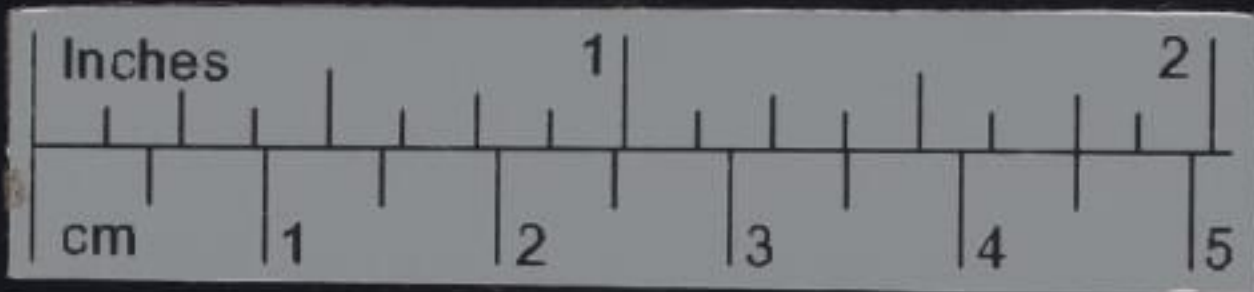
^{compact rather} ^{pale} Harsh greenish-grey bare, with numerous
^{not} ^{some} Cryst of white, Fe. & ~~patches~~ of Hornblende

- 27

Terrestrial. Ravine of Maricopa

3/28

Leadstone from near Copieps



38. very fine grained, laminated stone
41 irregular angular fracture
pale purple

1835

3129

30

31

32

3133

3134

3135 : 36

37

38X

39

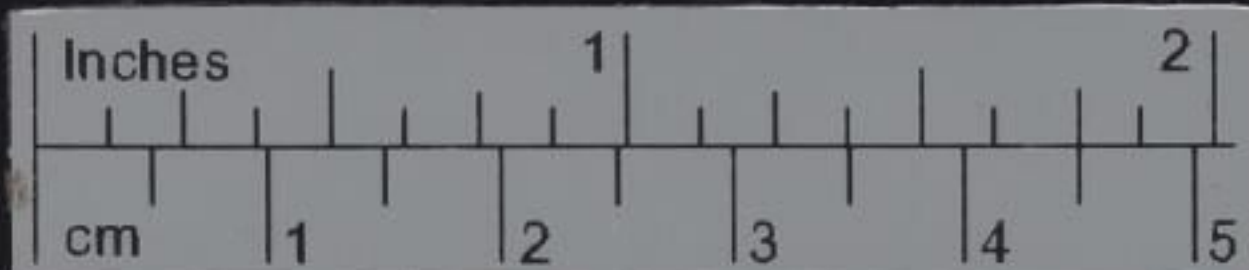
40

41X

42

43

3144



- 1835 Copiapi Subp / Iron Miller 18
3129 Green. Crystals? mine. Copiapi
—30 Muriate of Silver Chanuncillo
—31 Silver ore, in green sedimentary
basis with red festicles. Chanuncillo
—32 Terebintula. R. Claro. Copiapi
3133 Terebintula. Chanuncillo. —
3134 Petrified wood. Ravine near
Hagancha - Valparaiso: —

Lima. — Isla. S. Lorenzo.

- 3135 : 36, dark ^{not highly} grey. fine grained. Siliceous Sandstone
— 37 yellowish. ^{slightly} ~~semi~~-indurated, Earthy Shale
— 38X dark red. ferruginous. ~~laminated~~ ^{thin}
— 39 Exposed fine alternation of fine sandstone & shale
latter predominant. containing some salt:
dark green ^{hard}. fine grained. ^{with} ~~each part~~ ^{very slightly} ~~indurated~~ ^{thin} ~~laminated~~ ^{hard} ~~Pracina~~
— 41X Pale green. farspey or Pracina rock
Here appear much altered clay. & shale. —
— 42 granular, laminated siliceous rock
— 43. Bluish. very compact, hard, siliceous rock
3144 Sandstone with thin ^{white} layers
of a trapstone. or



3156 & 3157 V. 1313 Tin number
Out in a little sea lamp
from Salt

(3148) In the Trade union in Pacific.
Thin specimens such quantity of moisture
as to become rotten. I extracted
the crystals — the stone appeared
more salt. oxide of Iron & clay indi-
cated. — ~~It is to my mind a~~

(50). greenish brown, coarse crystalline
felspathic trap. —

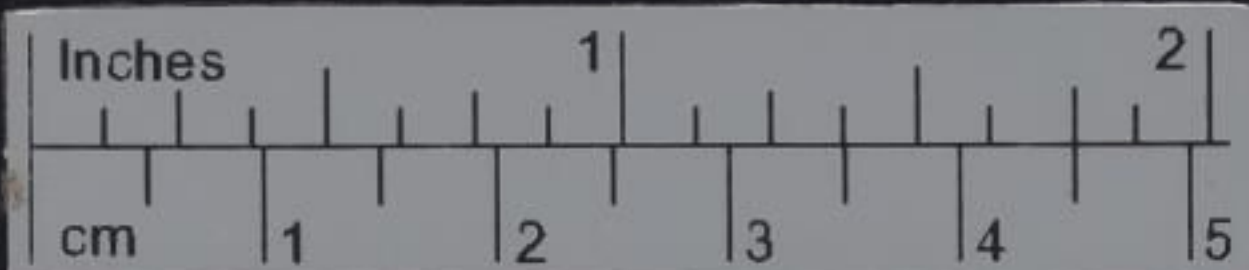
3152. hard. compact fine grained siliceous sandstone

3153. 3154. Do. Do. found in thin layers

3151. smooth ^{straight} angular fracture, compact
hard brown, ^{fine} points ^{part} with very few spots of
fels. & some small glittering ore of hornblende.

3178. — I don't think Mr. Lowry has
seen them, nor in my Cabinet.

1895. July
3145. June
Hornblende
— 46. June
— 47. #
— 48. June
X Na
— 49. Py
— 50. X fine
3151. X Du
...
3156. X
X com
3157. yellow
3158. 5
3160. 74
...
3175. 76:7
3178.
383. 84



1895. July Lima 19

3145 fine grained red, not hard, ^{fracture} conchoidal
~~Aluminous~~ ^{myristine} Clay. Sandstone thin layers

— 46 & yellow. ferrug. more sandy. do. thin layers

— 47 Hard ^{blackish} green, ferrug. indurated Clay Shale

— 48 & ferruginous base. with layers of Salt &

X Dark regular crystals & Iron. —

— 49 Regular ^{white} purplish Sandstone

— 50 X greenish gray, bluish, green stone

3151 X Dark green, siliceous. Alum sediment.

... very hard. with contained Cryst.

& Part a fine sublimation. —

3156! San. Lorenzo.

X comminuted Shells. partly decomposed
3157 yellowish white Calc. Powder in layers

3158: 59 Shells from 85 ft elevat. —

3160.....74. Shells. from Sandstone & its

concretions. Some. Concepcion Bay

3175: 76:77. From near Payta. ^{forming} ~~Shell~~ ^{giving} ~~Shells~~ ^{from}

3178:82. Shells I believe Corall. of Mexico

1383: 84 Shells. St Julian. Patagonia



3213 When struck emits a most
faded odor; decomposed surface

3215 numerous hair-like lines of
Iron Pyrites. -

3216 "Flat" Pyrites. V. Chili

7
faded

205 it is - sharp with little or no quartz

06. passing into texture of a Hornstone

07. allied to Spinel. in perfectly granular

work of texture - Hornstone.

12 microscopically granular with so
much of quartz

3216 V. Measurement for 13

1825. Aug

3185.6. W

3185.5. 9

3205.7. 7

3206.8. 8

3207.9. 9

3208.0. 0

3209.1. 1

3210.2. 2

3211.3. 3

3212.4. 4

3213.5. 5

3214.6. 6

3215.7. 7

3216.8. 8

3217.9. 9

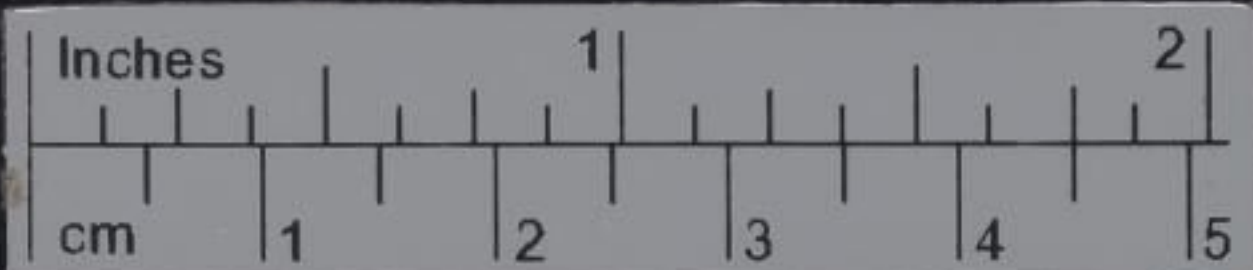
3218.0. 0

3219.1. 1

3220.2. 2

3221.3. 3

3222.4. 4



20

1895. August Lima

3188.6. White Limestone, near city, Manufacture

3188.5. Do. Black ^{not pure} Do. Do.

Capt. Fitz Roy. Specimens in lines

3205x White Feldspar & micaceous mineral

3206x Very close grained ^{or igneous} granite: crystals almost herding together: both from Islay
Cobija

3207x Do. ferruginous, rather more distinct

3208: 09. Close grained. Blackish grey

Lava-like base. Porph. with very few crystals of Feldspar: both glassy & common

3210 Do. with abundant quartz. Cryst.

3212x Hard. Hard, reddish purple. uneven

fracture semi crystalline. Clay Stone

3211" Do. ^{red claystone base} more purple with cryst. specks of C. of Lima?

Arica

3213x 14 Black impure, laminated limestone

3215x Lt. Black. calcareous. clay concretions

3216. Brown tone, with very numerous. Many

X Crystals of white quartz Feldspar

X & Black as. a "Plate Pottery" -



composed of minute broken crystals a some / good size: patches of all the rock parts
slightly porous structure

3226 foreign particles & with crystalline
specks. - Print in front
of the Kicker rock. -

The
minute
scoriaceous particles
appear dark
tend to
become
mineral

Its origin may be sediment but
structure at present certainly is crystalline

20.2, Resinous colour & texture. little angular
irregular granular particles, small
of knife. edge translucent; appears
to contain thick embedded crystals,
which are not so. - crystalline
of certain appear on some specimens. (large unnumbered fragments
faces; no color; easy for the

thin vein
of calc
matter

Hemlock
compared it
to Oolite
in nature
substance

Darkish green. fl. -
compact smooth part. (intensely
small) (Rough)
entirely

23. bright yellowish brown. hard. irregular
part. almost friable with pieces
like sandstone; under lens. greater
proportion small yellow grains. with a
few dark scattered ones. nature?
partly decomposed. like crystals

easy
friable
dark green
fl.

24. do finer grained. I suspect would
pop into the resinous rock

25. white earthy substance mixed with
resinous grains. -

1885

3217x

3218

3219

3220x

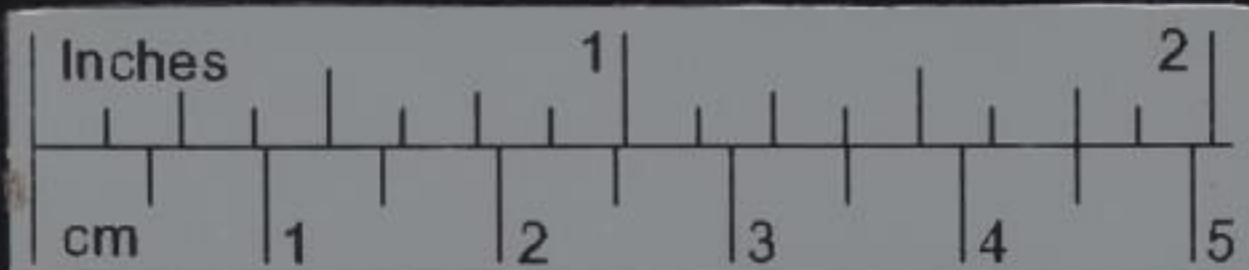
3222x

3228x

3224

3225x

3226x



1835

Arica

21

3217x

Apparently *Strophomena*. reddish or pale green. sedimentary matter of broken Crystals: united & perhaps basin rendered Crystalline & Heet. -

3218

(lost)

3219

dark brown, schiferous. & scales hard stone: with pseudo beccia angular harder pieces. - on the surface

(1264) Thin Laid. below & this series

certainly chemical action on fragments

Jalapagos Is. Chatham Is.

3220x

3221: A brown yellow soft resinous substance, I presume sedimentary (calcareous particles)

3222x

An apparent type of more compact &c. traversing the above

3223x

Yellow. brown. coarse. Meane's Sandstone, harsh. brittle

3224

Is. fine grained Is. - Is. -

3225x

Pale coarse Is: center of ^{white patches from calc. matter} later from which all come. -

3226x

Hard ^{compact} Meane's Sandstone, containing ^{blended} very homogeneous or



34. brown nearly black, fine into dark
green enamel. -

35. Do. same enamel

39. nearly jet black enamel

36 or
compact, fine, conchoidal fracture. rather
light brown stone, base slightly greenish.
contains numerous broken crystals of diff
sorts, minute pieces of cellular lava,
& ~~small~~ even a pebble of basalt. - Some
of the broken glass looking crystals appear
to have just ~~been~~ ^{tending} to become
resinous. -

39. large vesicles. generally compact. very crystalline
minute crystals of feldspar & mica can be
discerned & perhaps of augite -

50. bubbles of differ in being a trifle
finer grained & harder

47. 48. ^{crushing hands} semi-acid (so vesicular) dark reddish

low & green
+ brown
p
brown base. wh. mottled with black glass.
cr. 2 & 3 lines long of fractured white
glass. ~~it is~~ so abundant as almost to
compose rock - "base" does not look
like trachyte

V. Measurement - p 17

1885

3234

3235

3236

3237

3238

3239

3247

3248

3249

3256

3265

same as

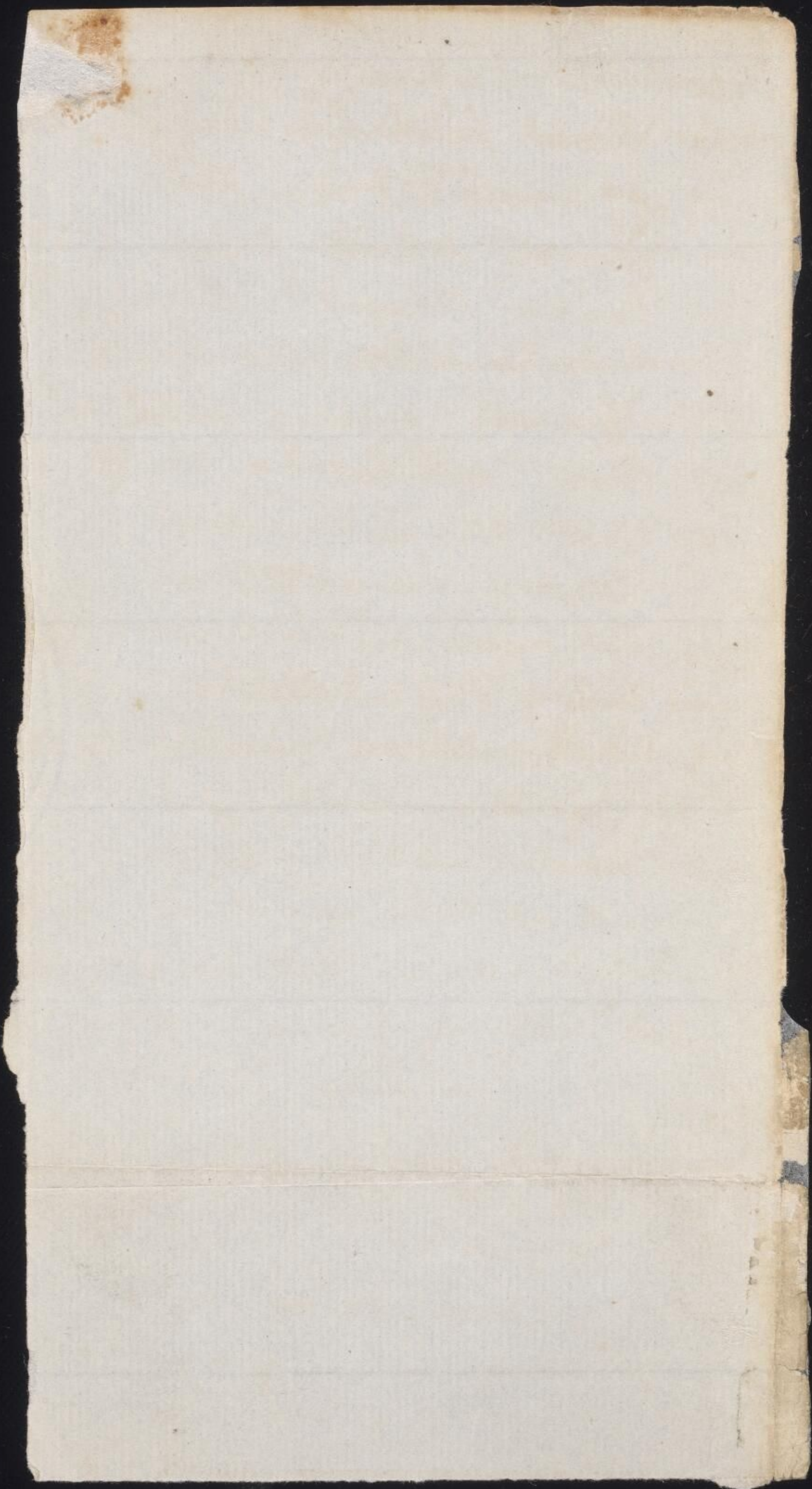
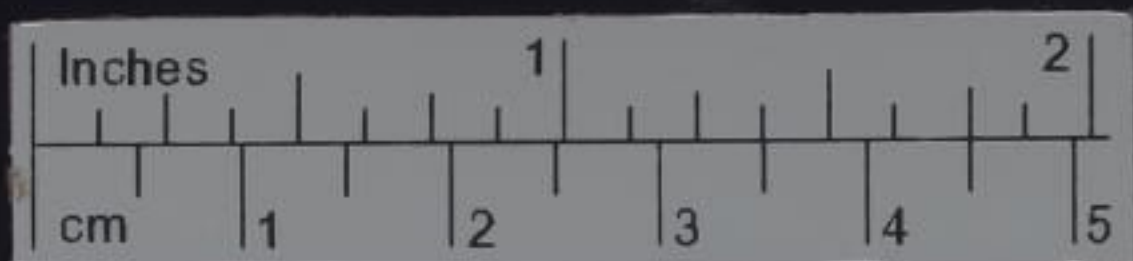
24/7



MS. BAR. 236.3: 22

3270. Black crystal in cuboidal fragment

crystal. L. 93° & again 92° & 87°





1835

Galapagos I^d. - Chatham I^d

3234

grey. irregular & much. Vesicular
Lava. with Olivine & glass ^{in glass state as in Diopside} felspar

3235

compact blackish grey. Lava with
Olivine & much fracture ^{a minute crystals of glass felspar}

3236

~~Black Augitic Cryst. Vesicular~~

3237

very same as (3226) from same

3238

place. Finger Hill. cement a vesicular
looking substance; specks of volcanic
glass & Pumice. &c. in bedded.

3239

Black. Augitic. Cryst. Vesicular Lava
Albermarle I^d. - Banks' Cove

3247

irregular vesicular. Blackish grey
base, abounding with Cryst of glass
fractured felspar. Trachyte.

3248

Do. very surface, slightly more vesicular

3249

Brown. light volcanic sandstone ^{light earthy light bed almost friable}

3256

Do. fels. with pisolitic balls. -
James I^d

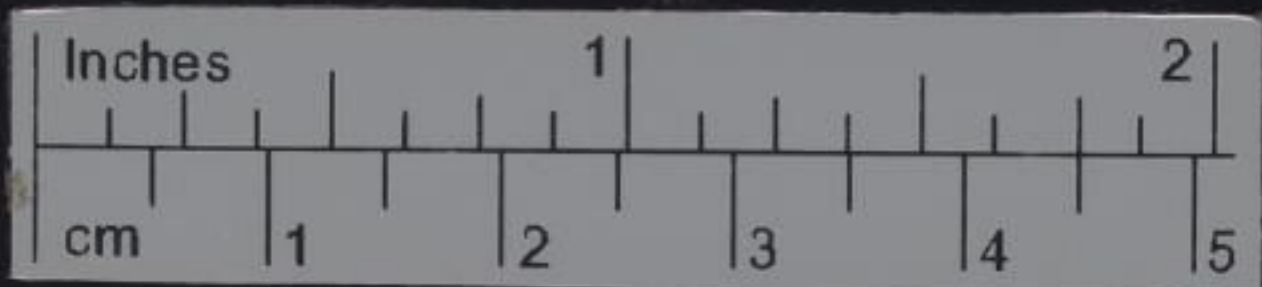
3265

very grains of Olivine. Trachyte. cellular Lava. frequent
large Cryst of glass felspar: common
kind

(same as 2417)



- 3266 ^{irregularly vesicular & v. impure} with Olivine ~~&~~ rare
- 3268 Basal piece crystalline
- 3271 m. - varieties common & fine grained. quartz generally visible mica changed into glass mineral: perhaps some feldspar
- 3275 generally more of latter & more cellular!
- 3280 with Olivine: ^{crystalline with no distinct shape} rare, as in fragmentary Trachyte with dark green
- 3266 This is an important point: Dufrenoy state P 93. that Olivine is never found in Trachyte
- 3283 is seen to consist of minute fragments of fine cellular rocks, decomposing & blending together, the greater part of which are orange colored, the others black & glassy
- 274 base. very cellular with black enamel with very few crystals.
78. with blue iridescent ^{could not measure for} patches of Olivine
- 81 jet black. crystalline vesicular lava, abundant with small of Olivine. from dark green.
82. This specimen is important because origin of orange & black patches can be seen to arise from alteration of minutely portions of semicrystalline rock



1835 3267 V. Measurements 11.13
Galapagos I. James I. [24]

3266 x Base. Blackish grey. few Lycopod Cyst

3267 x Do. with ^{few Lycopod} ~~scarcely any~~ Cyst. ^{not much fractured}

3268 x Compact ^{greenish grey} Lava with many small Cyst

3269 x Fine & much cellular Trachyte

base dark with much Cyst & fl. Feld: rather

reddish brown. surface. red glassy serice. -

3270 x Do. with fragment of altered granite

3271 x 72:73 reddish fragments of Do

3274 x Do. perhaps part of Quartz Vein

3275 x Red, ^{irregular fracture} base. Claystone base.

x with red earth & Cyst of fl. Feld.

3276 x 77. Light, ^{crystalline} brown-greenish, semi-

indurated ^{partially} volcanic sandstone

3278 x Brown. small cellular Trachyte

3279 x grey compact - Do. few Cyst of fl. Feld.

3280 x Blackish grey Lava. abundant

3281 x Do. blacker, more cellular

3282 x ^{orange} yellowish brown sandstone, semi-

Resinous, small black glassy patches

3283 x Do. compact fine grained

volcanic sandstone



3287 *Thiers D.* -
Here specimen brought
Mr. Chaffers -

88 here as before, some of the
crystals are ⁶ long; composed
of minute spherical cells; glass
jet black. -

78 It ^{amounts} thinks Calc matter has
Consult appendix. -
been melted & has subsided.

2288 x Heron compares this to Lucite. Last of
residue says crystals quite a large. -

I can for no means get a cleavage
77. abounding with ^{marked $\frac{1}{4}$ inch long} large cystal of Quartz (peppering
from B.G.) & Olivine. - very large, compact

80. Splendid needles of hercynite (Miller)

3288 made $8^{\circ} 25'$

$180^{\circ} : 85^{\circ} 15' : 93^{\circ} 40' : 0$

Hence albite

another good measurement 94°

3289 V. measurement p. 12 { well ascertain

79. pale ^{thin} greyish brown - large

circular lines with large of crystalline

mineral of the Zirconia family

1835

3286

3287 x

3288

3289

3290

3291

3292. 3

3376 Gm

3377 x

3378 x

V. appi
p. 19

3379 33

3381

from up T



1835

Galapagos I^{do}

25

3286

^{spungy and dense} Black glossy ^{erect} ^{form} ^{from} Senia. Bonifacio I^{do}

3287

^{Senia} ^{without crystals} Very vesicular horned (Nachtig?) Lava

3288

Small mud Cellular Lava, abounding

with large, numerous ^{got} of ^{features}

glossy ^{from} ^{Abingdon I^{do}}

3289

^{much} ^{leaves} ^{compact}

^{at least} ^{compact} ^{the} ^{cellular} ^{structure} ^{at} ^{so} ^{much} ^{fractured}

little cement: ^{angular} ^{crystals}

3290

Shells. area. ^{spurred}. valve of Chiton

from a Breccia. Chatham I^{do}.

3291

Shell from Champion I^{do}.

3292

3 Shells. Bird locs I^{do}.

Jahiti I^{do}.

3376

^{extreme} ^{part} ^{erect} ^{form} ^{from} ^{Senia} ^{lava} ^{basaltic}

3377

^{common} ^{erect} ^{form} ^{from} ^{Senia} ^{lava} ^{basaltic}

3378

^{angular} ^{half} ^{the} ^{cells} ^{irregularly}

filled with ^{lime} ^{half} ^{with} ^{silica}

3379

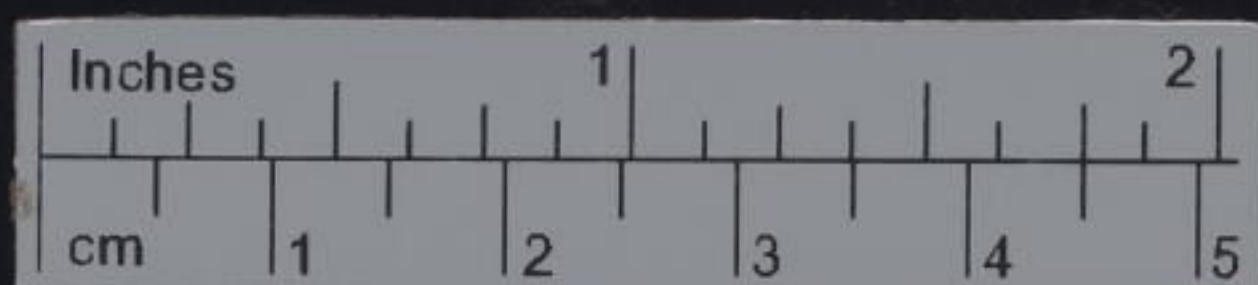
3380. Angular with ^{mergels}?

These all from central mountains

3381

Black ^{compact} ^{laminated} ^{lava}

This & the following from near coast.



3395 Bay of Island

82. Angular coarsening compact lava.
Black & greenish kinds mottled together
not crystalline
85. much more ^{decomp.} earthy. Shown become
soft. -
86. greenish quite decomposed lava in
state of clay. -
87. I should think volcanic sandstone?
96. easy friable white glass
97. easily friable. - angular - irregular frag.
98. irregular frag. yellowish white, not very
hard. some decomp. egg shape. R. which has
been crystalline. - not sedimentary R.
though like one. -
99. Reg. cryst. felspar thin bars with uneven
elongat cyst of gl. f. egg. with
little bulk of the hard iron earth.
2 some radial to radial
404. Clay iron stone.
84. Much large mass of Shown

1835

3382^x : 83

3384^x : 23

~~into~~

2386^x 23

a

two

3395^x Com

3396^x reg no

3397^x 8

~~the~~

3398 8

3399^x 8

3400 8

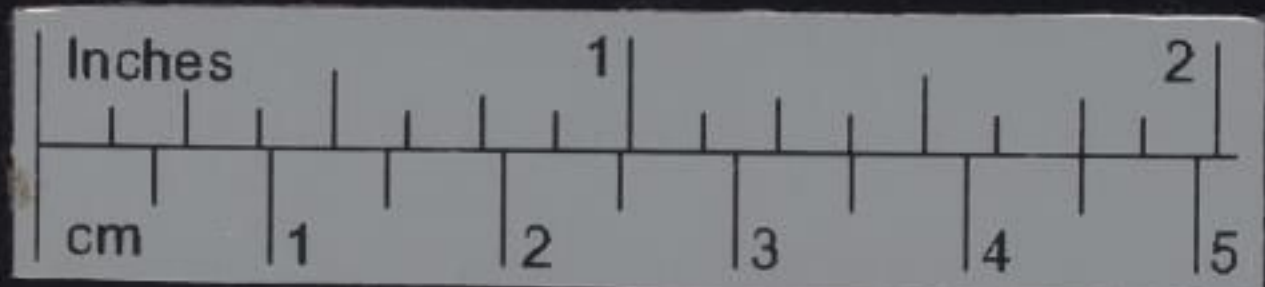
3401 : 4

3403 10

3404 Com

~~h~~

~~h~~



1835

Tahiti I. - (has with some

3382^x:83 - Lava: latter full of decry. cyp

3384: 2385. Is decomposing passing
into nature of Wacke [26]

2386^x 2387^x I believe Wacke. perhaps
a sedi mentary deposit. on the
two Wackes. -

New Zealand

3395 Compact Slate. almost Feldspathic rock
very irregular fracture. traces of feldsp. threads

3396 no ~~cr~~ cyp. stones do yet does not look like

3397^x dark bluish grey very ~~cr~~ crystalline. & assuming
the character of greenstone

3398 Do. pale colored, partly decomposed.

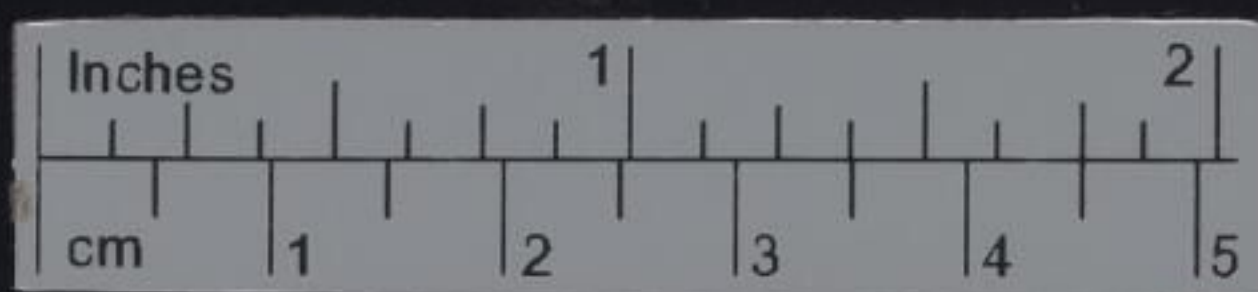
3399^x grey. greenstone, with cyp & glass
Feldspar & balls of Mesotype (?)

3400 like (2397)

3401: 402. Compact. Crystalline. pale
flesh-colored Limestone

3403 White chert or flinty rock, conchoidal fracture

3404 Compact, hard, heavy. purplish brown
high ferruginous Aluminous
rock (strong aluminous. smell)



3408 . 09. 10. - West coast of 20.

07. abundant with minute cysts.

11. very compact, without as distinct
cystelline facets. - heavy

3406 3405 V. measurement . pc . 13

1835

3405

3406

3407

3408

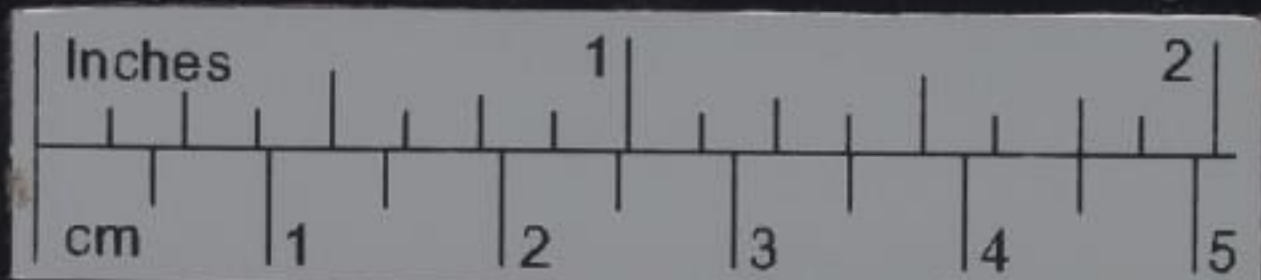
X

3409

3410

3411

3412



L 20 1835

New Zealand

27

3405

Concretion of grey. Calcareous clay slate.
Organic(?) in surface in centre. —

3406

Blackish ^{crystalline} greenstone with elongated
Cryt of. ^{feldspar} feldspar

3407

Grey. Do, centre partly amygd-
daloid with ferruginous matter

3408

White, softish Calcareous
stone, containing scattered & in
planes. very numerous, small, dark
green. mud. stones of Chlorite(?)

(perhaps. concretionary ripin) & a
few grains of quartz. —

3409

Do, all concretionary mud fine-
grained & softer. —

3410

Lignite,

3411

Concretionary lumps of hard, ^{dark} slate
coloured feldspathic rocks. in a nearly
similar kind

3412

Soft, yellowish decomposed do, passing
into the above kinds



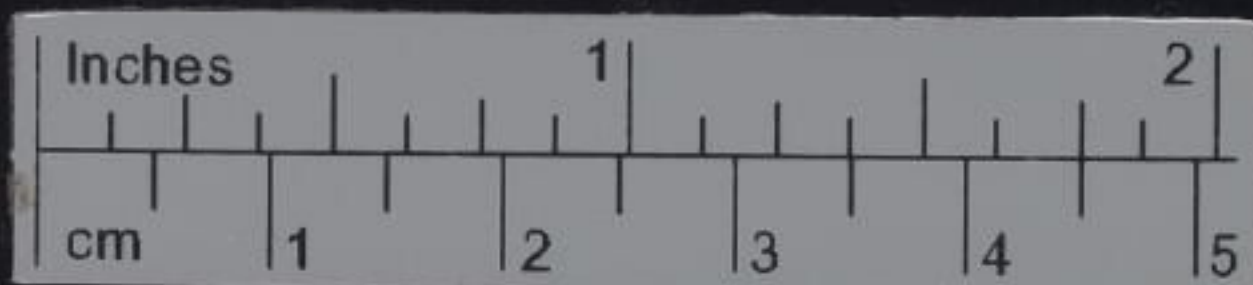
424 appearing a coarse. light brown
they fine pebbles: consists
of many perfect small ^{separate} crystals of
quartz. united by a ferruginous or
white & fine earthy substance in
very small quantity. one or two scales
of mica: a most extraordinary rock
25. much finer grained, abounding with the prismatic
crystalline not apparent

26. The iron probably is in state of Hydroxide.
Black small glittering crystals. -

25. the proportion of white fine cementing matter
is large: one or two grains show faults
others few in number & small

28 & 29. I could distinguish no cystal. structure

Jan. 1836
3424? grain
3425? cement
3426? grain
3427 Dec
3428? L
3429? X
3430 Pal
3431 Black
3432. Co
3433 Co
3434 Pal
3435 W
3436 Dan
bus
f



Jan. 1836 [28] Sydney New S. Wales

3424 } grains of quartz. more or less fine
3425 } cemented by ferruginous matter, & a white
powder, which probably is decomposed
Feldspar. — Escarpment of Blue Mountain

3426 } ~~shale~~ ^{shale} grains of quartz, & iron, with
pebbles of quartz. —

3427 Decomposed greenstone, containing
a considerable quantity of Iron.

3428 } Sandstone, same as the
3429 } first kind. —

3430 Pale, blackish blue, ^{very} compact Clay State

3431 Black high carbonaceous Clay State or
a very strong Coal

3432 Coal, rather light glossy fracture

3433 Do, rather more strong, ~~slightly~~ laminated

3434 Pale blue Clay State, impression
of *Dicostyleus* leaves. —

3435 White high Gypsum Limestone

3436 Dark green, semi Gt. Feldspathic
base, containing numerous grains
of Quartz



40. Cavities lined with oxide of iron.
Copper assumes rather character of a trachyte

State which appears to be a trachyte
Nucleus of which is a trachyte

3438. Iron as found in the trachyte

3439. Shale with a trachyte

3440. Shale with a trachyte

3441. Shale with a trachyte

3442. Shale with a trachyte

3443. Shale with a trachyte

3444. Shale with a trachyte

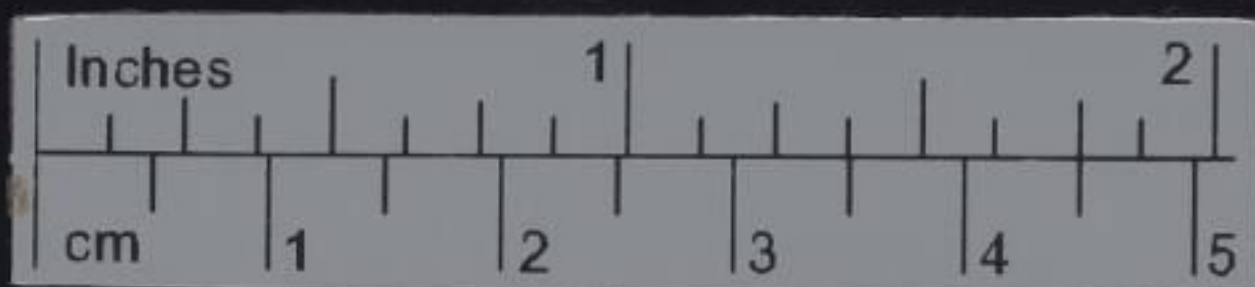
3445. Shale with a trachyte

3446. Shale with a trachyte

1836 Jan
3437 a
3438 Do
with
3439. Pa
with
octopus Cyl
3440. Tan
X flesh
the
3441. Bl
with other im
inter
3442. Pin
with
lan
3443. 44
Shi



- 4 in. 1836 Jan. New S. Wales 29
- 3437 a very pale, glossy clay. Slate
- 3438 Dark green Feldspathic greenstone
with many large Cyst of Hornblende
3439. Pale red, ^{rather} harsh base. Porphyry
with Cyst of red Feldspar & numerous
osteopores Cyst of Quartz
- 3440 Same kind of Porphyry. base
flesh-colored, slightly carious,
the imbedded Cysts small & infrequent
- 3441 Black ~~trappish~~ ^{has} ~~rock~~: Basalt??
with other irregular features
containing specks of Quartz
- 3442 Pink Feldspathic base, Porph
with Cyst of ^{irregular glass} Feldspar & many
large pieces of bright green. Hornblende
- 3443 44. Fossil wood. from
Miwami. South of Sydney



3455. = ^{granite} Siliceous base, containing Crystals of

X yellowish felspar (?) a very few of
Hornblende & Anorthite. Granitic
appearance. —

47. Muscovite

48. Muscovite with some difficulty

53. The F. has not however the flinty
structure. —

55. The Cr. which I have called yellowish
felspar. — easily fused with green
slap. — are soft & when decomposed
metalliferous. — I measure an
angle between 137. & 135. which Prof
Mr. Day belongs to Augite or Hypersthene,
which latter I have no doubt it is.

1836 Feb
3447 X White
shading to
small, sand
3448. Do
semi = cm
3449. Blue
Cr. t
3450. Dark
fine
3451. Iron
3452. (Muscovite)
3453 X Green
look
3454. Orange
3455. ~~White~~
3456. Green
green
3457. White
3458. Green
Dark
cr.



1836 February. — [30] Hobart. Tron. —

3447 x White. ^{almost compact} ex-f-vly. fine grained Aluminous
^{not adhering to tongue} sandstone; uneven fracture on small scale

3448. Do passing into a Porcelain rock
semi-conchoidal fracture. —

3449. Blue, siliceous. Tron with minute
^{with impurities} cryst grains of quartz. ^{semi-} conch: fract

3450. Dull white, siliceous, aluminous
^{intermediate between top lot} fine grained. ~~sandstone~~ —

3451 ~~fine grained~~ ^{crystalline} semiprecious ^{traces} greenstone

3452 (Rustic ~~look~~ ^{greenstone}; rather a Sienitic

3453 x granular ~~appearance~~ ^{appearance} & a very siliceous
looking ~~siliceous~~ — Sienitic appearance

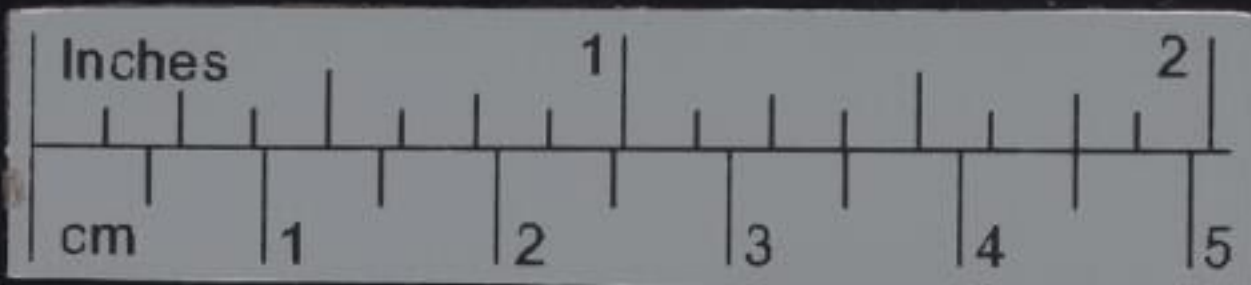
3454. Ordinary rather coarse. greenstone

3455 ~~siliceous & granular~~ ^{fine grained} ~~like above~~

3456 ^{very slightly} greenstone? ^{granular} ~~appears like~~ ^{fine} grained variety of above with

3457 White chert rock imbedding
^{shells of Crust} grains of quartz. & impurities

3458 Blue, slightly calcareous, siliceous
compact clay. Note: impression of Crustacean

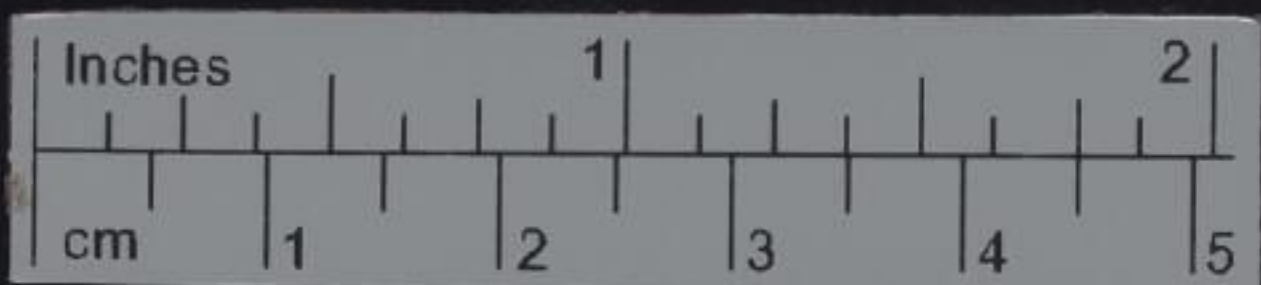


69. minutely crenulate, partly decomposed
Vap. glab. semia. with patches of bright
p. 15 green waxy substance
R. same as (55)
74 as 447. more earthy part & shell
3472 V. Measurements. p. 13

1836. Feb
3459. Do
3460.
thru
Cra
3466. Slip
cont
3467. Crap
very
3468. Vap
Des.
p. 15 gr
3469x Pa
3470x Pa
3471x Pa
Locality Cluff Cra
3472x Pa
wi
3473 Pa
Cla
3474x Pa
Ab

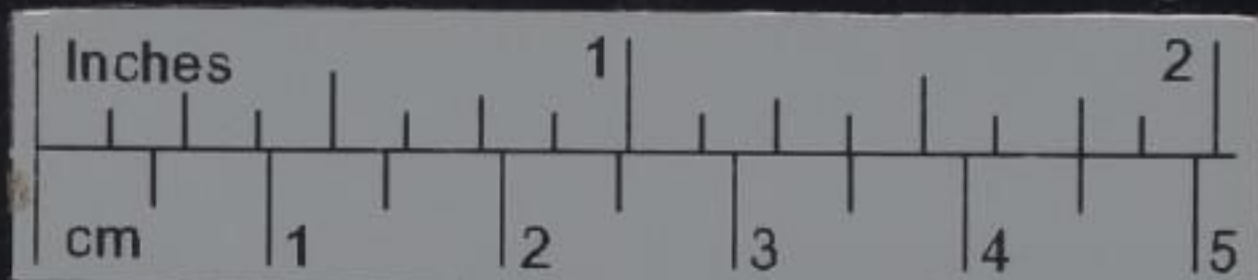


- 1836- Feb. 1st. What town 31
3459. Do. Do. greenish brown. not so hard
3460. 65. Same as above
thin rocks, with casts of shells &
Crallines. -
3466. Light Siliceous. ^{fine grained} sandstone
containing rounded grains of quartz
3467. Compact Basaltic with numerous
very minute ^{dark greenish like iron} grains of red Olivine
3468. Vesicular, cavities, linear of Do
Basalt, cells lined with amorphous
green matter. ~~Aluminum~~
- 3469x Partly decomposed. Series of Do
- 3470x Pale blue Siliceous Clay Slate
- 3471x full of impressions of shells &
Crallines: from near Lancaster
- 3472x Greenstone, from Wellington ^{yellow} crystals?
with many crystals of Hornblende
3473. Pale blue ^{rather} coarse ^{grained} speckled, compact
Clay. Slate
- 3474x White, compact, uneven fracture.
Aluminous stone, strong smell of Do.



75. ^{like} embeddings, crystals. 1mm & 1/2 per
80. perfectly 1/16 beneath fingers, nearly
pure
3495. Too transparent, (chalcodine
appearance) for flint. Heron
81. The points are ^{sometimes} just fusible. & sometimes
assume a yellow tinge & so colours
brass. -

1836 Fer
3475. J
X
3476 : 77
3481 X. Wh
X
3482. ^{heron} Par
alms
Hole almost pas
3483 : 84
3487 : 88
3489 : 90
Hobart
Tern
3495 X. F
3496 : 97
stone
atmos



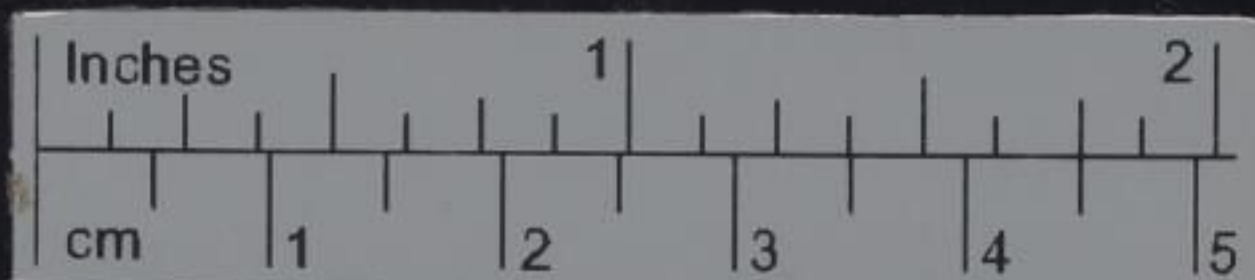
- 1836 Feb^r. Hobart Town 32
3475. Same kind⁴⁷³ of rock, blue & yellowish mottled
- 3476 : 77 : 78 : 79 : 80 : Blue Crystalline Limestone with Shells. -
3481. White ~~sub~~ pulverulent powder of Lime occurring with above
3482. Particles of Quartz. united & almost blended in a white siliceous paste : brittle, straight ^{by sharp blow} fracture
- 3483 : 84 : 85 : 86 : Silicified wood from central plains. -
- 487 : 88. Silicified Wood
- 3489 : 90 : 91 : 92 : 93 : 94 : Pale brown, vesicular, frequently linear cavities, finely crystalline, not ^{crystal} very bearing impressions of leaves
3495. Flint in above
- 3496 : 97 : 98 : 99 : Whitest Aluminous stone of the older series abounding with casts of *Trilobites* from River



- 33 minute transparent grains of *S.*
involuted of white thin abundant
Calc. matter; and black stroms
34. The statocyst part is not cyst, pale
brown very compact
36. *Sy. spec. par. 5.* -
occupies compact
- 39 or. They all consist of firm calc.
sandstone siliceous. particularly
excepting one with Heliciform
centre = a concentric structure
is very manifest in the greater
number

1896. *Sy.*
3500 *Bl.*
Rufus
3501 *Cl.*
3502 *Bl.*
is

March
3533. *X* *Ca.*
3534. *Int.*
X *most*
Cl.
3535 *East.*
St.
3536 *X* *Hand.*
wid.
3537. *Soft.*
3538. *Calc.*
San.
3539 *X* *d.*



33

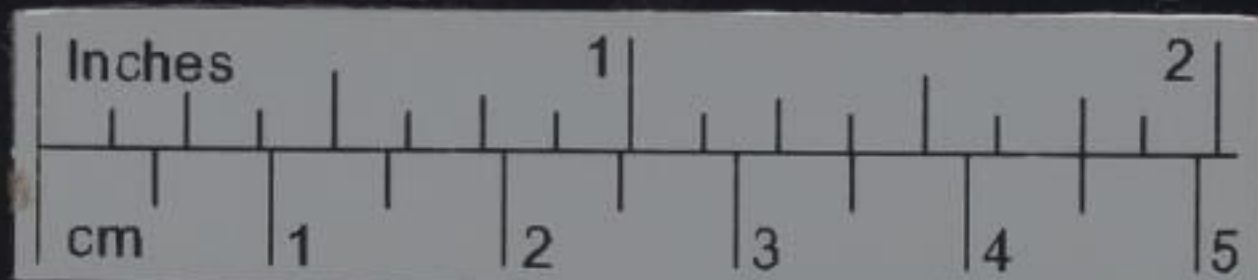
1836. Feb. Hart town
3500 Black Limestone, with imperfect
casts of shells. L of Maria
3501 ^{Russians} Clay slate. Quartz. Buff
3502 Black Schist in Quartz rock
island in Baffin Strait.

- March King George's Sound.
3533 X Compact ^{pale} grey Calcareous Sandstone
3534 X Intermediate in character between
most earthy & most Stalactiform.
Calcareous rock. -
3535 Earthy calc. so capped with very compact
Stalactiform. so
3536 X Hard fine grained Cal. ^{partially of silica} Sandstone. Capped
with same substance from Stalact. like
3537. Soft yellowish ^{multispinulose} very Calcareous Sandstone
3538. Calcareous yellowish, slightly agglutinated
Sand. with Bulimina.
3539 X 3547. Casts of trunks & roots
of trees. in Varieties of the Calc.
stones



I judge they have been corals. From small symmetrical
cavities left unfilled
3566 of compact yellowish Carb. of
Lime which apparently have
but the structure almost entirely Milneburg
been a Corals. petrified -
65. Has become extremely hard.
Echini spines thin as with
true cleavage. which they have
not.
554. Iron in parts has formed a coarse
but work. with metallic appearance
like at 2645 m. - but not so
much developed.

1836
3548. Fin
3549. Ho
3551. Bla
3552. Pal
3553. Pal
3554. 3555
3565. Ye
X silt-
shells
3566. do.
X



34

K. Jersey Sand

1836

3548.

Fine green. greenish ^{with} large cysts
of Zeldspar

3549

Helix in same sand, on the Bulim

3551.

Black Imp. rock containing many
very small cysts of Zeldspar. - Like

3552

Pale green here, containing few cysts
of Zeldspar & pieces of quartz

3553.

Pale do. - with much quartz

3554

3555. Fine grained Temaguan
sandstone with only few
subangular grains, including rounded
particles of quartz, & containing angular
concretionary bits of Temaguan Sandstone
frequently angular-vesicular, & cellular
Are they Calcareous? -

Keeling Is. -

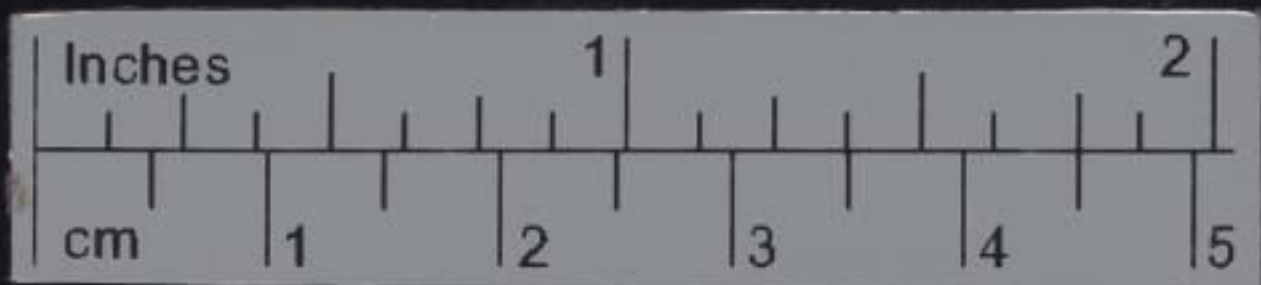
3565

Yellowish white vesicular stone

X soft - consisting of rounded ^{fragments} particles of
shells & corals. intimately united &
blended together. -

3566

do. containing angular irregular patches



70. with naked eye. Transverse fracture
shows any structure visible
71. Has been a coarse coat, & though
not ever heavier than last yet
structure more evident

1835.

3567.

3568.

3569.

3570.

3573.

3575.

3576.

3577.

3578.

3579.

Co

faul

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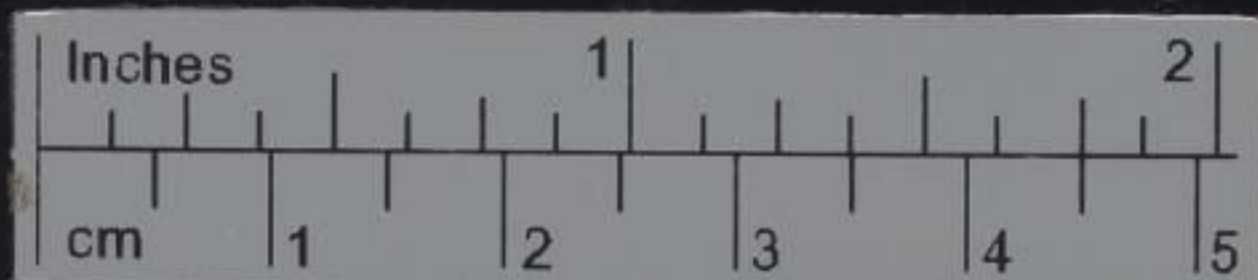
Wh

h

the

Ca

Ca



- Keeling Is ^{no fossils} 35
1835. 3567. Compact yellowish almost cyst.
fossils. Carb. of lime, probably Carb. petrified
3568. As the commonest Coral
blocks on the outer coast ^{parts slightly filled up}
3569. Do more compact, rendered solid & ^{heavy}
- 3570: 78: 72. Do more or less altered &
approaching to the character of the
yellowish Carb. of lime.
- 3573: 3574. The second most common
kind amongst the blocks; the
latter partially petrified.
3575. Perhaps distinct kind; not
so common as the foregoing
3576. Probably. Do. partially petrified.
3577. Buccia same as (3566)
white, hard & sonorous
3578. White petrified hard Coral from
the solid floor at foot of beach.
3579. Calcareous sandstone from its inter-
cal spaces



598. Henlow agrees. the marks certainly
look. as if they had been anyydeloid.
then again he says. have a very peculiar
lustre. resembling in some respects
a sphire; can be instantly recognized

In separate Bag with coral-works
of Mammilion & Keeling
nos. 42

1835.

3581. A
boul
in the
22.

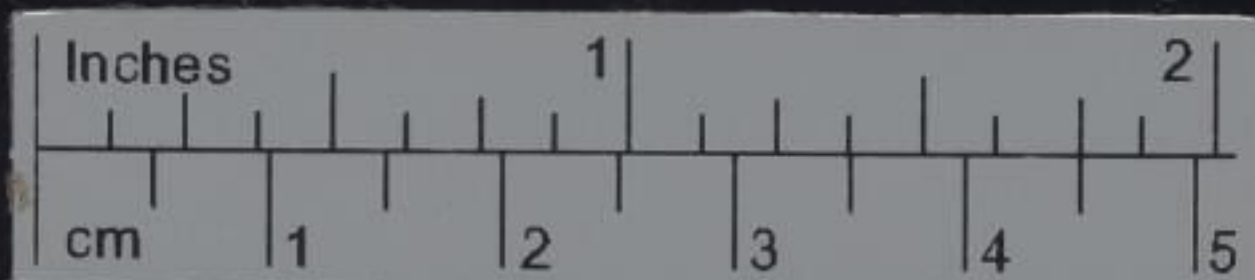
3582. A
J. C.
petr
matt

3583. Cra
the

3584
Tahiti
Mach
bene
Crall

3598
x
Rea
Bou

3617. Ex
fom
An



the century 1835.

Keeling Id.

36

3581

a very peculiar
aspects
of composition

A piece of a well rounded
boulder of compact greenstone found
in the Coral breccia of the Keeling
Id. in position of East. Reef.

3582. A fragment of Coral (picked up
of C. Reef. I know not where)
petrified. of a shattering white Calc.
matter & part of semiporous
Calc. matter. —

will find
fossils

3583 Coral block same as (3573)
the second most abundant kind.

3589

Cabined

Small fragments; about 2 inches
beneath the living crust of
Crallinas, on the solid ground
of reef on West Island. —

3598

Agate pebbles from White
Rock harbor. West Falkland

3617.

Exceptionally fine, white ^{or mud} sand
from 8 fathoms water at
anchorage at Keeling Id. —



3623 given to me of Capt. Lloyd.

18- ^{gran} coarse. harsh. Blackish grey. evidently very
pelopethic. for melts into green near
trans parent glass. ^{large cavities} ^{tiny} with mainly
hemispherical nodules of Ce of lime.

19- very dark green. fine grained
compact. brecciated like rock.

20- crack. fracture. melts into black ^{grey}
slightly. green lava. ^{has S.B.D. no good fossils}

21. Olivine. L. 90°. 36. (in night) a New pipe. & large cyst of quartz
full of crystals.

23. Red soft. Clay tone lava

24. 25. irregular. earthy fracture.

627. Coarse particles intimately united

1836. May

3618x 19x 2

varic

3622. Cellul

f a

netun

3623: 24

x la

wilt

3626. Sup

f C

f P

3627x coar

3628: 29.

f Co

Brecc

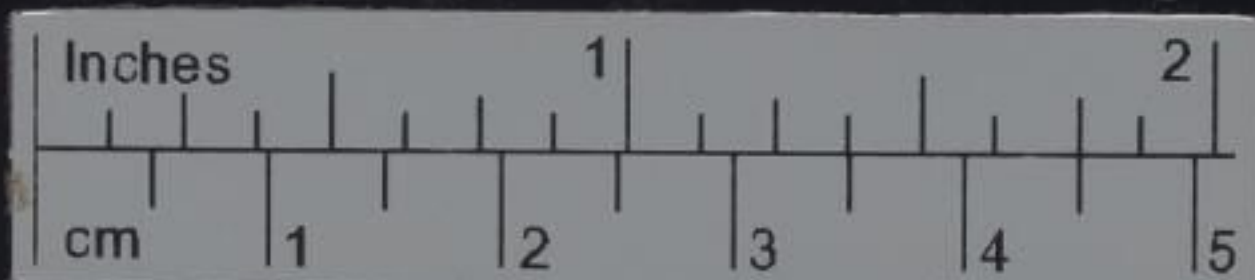
3630: 31:

Atm

kg c

the

are



1836. May Mauritius
- 3618x 19x 26: 21. The most abundant varieties of Lava: (the 3 first)
3622. Cellular lava. covered by a patch of a Calcareous rock, perhaps originating in a calcareous spring.
- 3623: 24: 25. Varieties of Lava. from la petite Montagne: the latter with some small singular cysts
3626. Superficial Breccia, of fragments of Coral. in layers: both of Port Louis. contains calc. matter
- 3627x coarse compact Calcareous Sandstone
- 3628: 29. two of the common varieties of Coral, ^{as they} overlying. There is a Breccia thin sandstone.
- 3630: 31: 32. *Fossil productae*, from about town. Van. Demers land. They come from the neck of the peninsula. where the Convicts are confined.



- 39.4 o. coarse. ferruginous. the part in immediate contact with large cyst. of mica & feldspar & quartz. the disintegrated granite united
44. Iron appears to have separated from sand (? with) & formed a reticulate net work. -
49. even in these specimens. The ferruginous matter shows contact tendency to form shell. - generally angular as then case. (then lichen). but also spherical as near Chibol. & Blue Mountain. Spherical tendency best developed in
- 650 651 almost too fine grained to be called sandstone. -
- 44 become megacr. with Oloupipe. in boy iron: has small conc. fract. with glimmering blackish brown. metallic lustre

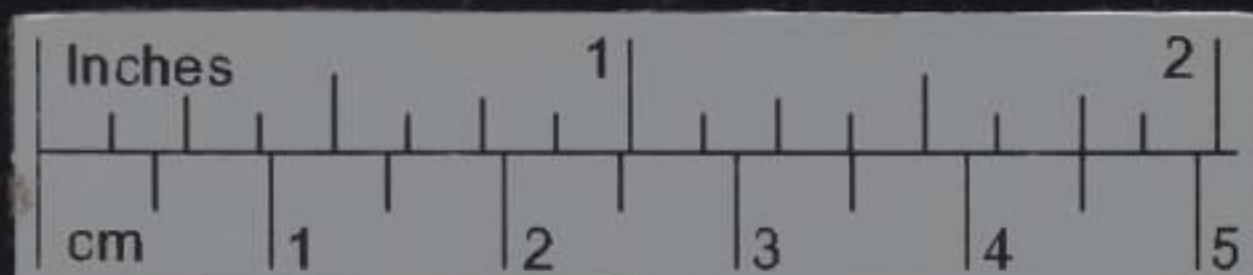
1836 June
3639 40.
3641 fine
very
upon
appearing
3642 shell
3643. Fuj. white
3644 45:
high in metal
vacc
3647: 48.
in incrustation
stone
3649: 50
Y shell
Carr
on 7
3651 x 2
stone
3652 Calc
crust
(Josc
3653 Ba
apso



- 38
- sent in 836 June Cape of Good Hope
- 3639 / 40. lowest part of sandstone on granite
- 3641 fine grained ^{hard} white ~~siliceous~~ sandstone
very light tint. spots of quartz
upon so. - Simons brown
- 3642 ^{appearing} siliceous sandstone conglomerate ^{high up} - do
3643. ^{fine grained} white siliceous sandstone - do
- 3644 x 45: 46: High ferruginous. glittering
metallic rock. containing balls &
raesites with loose white ^{ferrug} sand
- 3647: 48 ^{fine grained thin layer} ~~Other~~ coloured. ferruginous. mottled
stone, impossible to break large piece
- 3649: 50 ^{slightly} ferruginous sandstone, containing
small pebbles with irregular
cavities ^{owing to removal of} & patches with ^{white earth} sand. -
on road between Simons Bay & Cape Town
- 3651 x a concretionary ferruginous, aluminous
stone, somewhat like ^{variety} East on road to Paarl
- 3652 Calcareous aluminous stone, upper part
crystalline into a stalactitic rock.
(Tosca rock) sand flats between ^{main land} peninsula
- 3653 Basalt? ~~Quartzite~~ ^{granite} rock
associated with granite & Paarl.



55. fine grained. some white. an calc. cement
sandstone. cement probably siliceous. — Some crystalline
from have acted for some of the ^{weathered} faces. show
crystalline action by numerous facets. probably some
little vein
56. extremely quartzose ferrug. sandstone
57. literally fine grained siliceous sandstone
58. dark red. grain embedded in ferrug. cement
59. fine grained sandy appearance. not showing
crystalline structure
60. sandstone black & glittering from iron
61. white high quartzose
62. large frag. of quartz. flaking & melting in ^{part} siliceous
matrix
63. some white sandstone layers. separated by very little green
64. tinge of dusky green. hard, slightly glossy. minute
scales of mica
65. pores without mud difficult, dark colored
3668. layers very thin, scales of mica
small. layers slightly contorted. —
mica. black glittering felspar granular
yellowish. quartz in small quantities, very
thin laminae. but perfectly characteristic.
mixed with coarse granular veins. of indistinct
or veins & not parallel layers
70. Black pellets even of size to some
cryst. texture of felspar & mica



col. and
some of the
foss. sh. 3654
partly true

some
kerf. cement
not shiny

lay in silica
very little green
of grey, black

dark colored

of mica

contorted

granular

scattered

character

veins of

at layers

only 6 in

thick

1836

3654

3655

3658

3664

3665

3667

3668

3670

Cape of Good Hope 39
granitic rock with schist. the
crystals take a radiating form
this is however a miserable specimen.

56:57. The common varieties of
sandstone in the section of the
mountains of the French Hoek
Pass: the following specimens are
all common & come from near
same locality-

59:60:61:62:63

Common Clay slate. Lion's Rump

66. associated with ~~crystals~~ any order
a sub ^{crystalline} granular feldspathic ^{compact} ~~state~~ ^{large}

67. Do. decomposed, color pale brown, from
a dark black grey. soft earthy.

69. imperfect grips on mica slate. near at
junction of granite & clay slate on Lion's back.

71:72. Do. Blackish, with tinge of
purplish ^{laminated} micaceous ^{granular} feldspathic rock
with singular small black dots of
patches, giving a granular appearance



73. ^{smaller} coarse parting. show granular structure, rather
74 finer grained. more glass. mica in
state smaller scales

75. quite compact. get dark spots & some
impediment. felspar has been more
homogeneous

76. minute. I think certainly felspar. sometimes
show tendency to form a single crystal

77. H.R. I think it may be proved
from this that impurities are
separated by heat.

3679 ^{compact} darker or paler unaltered variety
of Clay State, about $\frac{1}{4}$ mile.

Distant from junction: with
lens show a minute Cryst structure,
or indeed ^{hardly} all the Clay State
appears to show in this district.
without less obvious compact clay state

1836

3673

all probably
laminated

3677

3679



usually
not, rather
mica in

1836

4 & 10m

more 3673

intense
at

covered
are

variety

make

: with 3677

Cryst structure

State

distinct

ly state

Cape of Good Hope 40

close to junction of the granite on
the beach. -

: 74: 75: 76. . specimens a few yards
further from the contact. -

all strongly
amorphous

(73) much the same as (70). but with
white ~~patches~~ ^{of quartz?} patches, (74: 75) much
the same as (70) less micaceous &
more homogeneous: (76) pale brown
homogeneous: very slightly micaceous rock.

with distinct small white inclusions of
some mineral. (felspar?). which decomposes
readily & leaves a honeycombed rock

X : with 3677 : 78. a couple of hundred yards further
from junction (77) much the

same as (70) but considerably less
micaceous (78). Do. but not

at all micaceous pale compact
homogeneous ^{slightly crystalline} felspathic rock. with
even & almost conch fracture.

3679 : 80. To the naked eye, a



700. bone totally compact. small aciculated
cavities. lined with cysts. - small cyst of
deep flesh. ; looks pelypteric; no other cyst
evident. get mottled into black enamel.
701. Black flesh.
703. few minute vesicular cavities
202. flesh 1 yellow shaven, a little
angite

osteoderm from
flesh decomposed
(chubasic?)

1836

3681

3682

3685

wh
close
a C
82:
asbe
afn
On

July

3700

grey
fasc.

3701

Black

4.7

irregular
carth

3702

Black

3703

green

minute

crystals

3704

dark
green

few

crystals



crinulites
all out of 1836
the other 3681
black enamel

crinulites 3682: 83: 84, singular mountain rock.
asbestiform - quartz interior of
Africa

3685 Inkite. Do. J. A. Smith

July St Helena

3700x Greyish Black. light feldspathic, compact
base with few crystals of glass feldspar

3701x Blackish ^{basaltic} ~~Trachyte~~ ^{strombolite}, good sized crystals of feldspar
A. F. irregular small cavities with white decomposed
earth & others lined with ^{small minute crystals} Cryst. Matter: -

3702 Blackish basaltic base. ^{compact} irregular fracture
with crystals of ^{feldspar & perhaps some grains of Olivine} Olivine (then 3 from strombolite rocks)

3703x Greenish grey. pale. plumbite: acicular
crystals of glass feldspar, ^{generally plumbite in small} compact ^{fracture, strombolite} ~~enriched~~

3704x Greenish ~~Black~~, greenstone like base, with
few crystals of glass feldspar. ~~not irregular~~ -



some fus. the in piece. + some attrited before. very few of 964
710- Are not these Domites? ^{then}

711 not trace of cyt structure. ^{homog.}
little. Alum small, laterally heavy
+ ^{hard texture} firm, blacken! under blowpipe
difficult fusible. - ~~turn green~~

had been
red &
yellow

fused into green glass -
contain a great deal
salt - which efflores at
on being kept

710 some brachyle for its homogen from sand
(entirely pure fusing into nature of Domites)

705 from the manner in which ~~the~~ the purple
base enters in in angular (H) spaces
of the white matter, I do not doubt
better crystallized as we now see
it. -

3705. Purp
3706. Pink
3707. High
3708. Pale
3709. Earthy compact
3710. grey
3711. White
hard
I think
it is
sun



St Helena

3705.

Purplish base, ^{near} reduced into waste. & [42]
Porph. with numerous cys. of white soft felspar &
irregular centres with do: Hapstall Hill

3706

decomp.
& aggregated
crystals
probably

Pinkish red, mottled with white. fine
grained. ^{between teeth} soft tufa. ^{with spec. quartz} set compact with
crackled texture: upper series.

3707.

grey
crystal

High cellular, grey, semi decomposed.
feldspathic lava. Diana's peak.

3708

Pale brown. compact, hard, base, almost
composed of ^{minute} crystals of glass felspar.
Lava stream. Benemulen Plain.

3709

with compact
pearl scales of
minute

lean brown. feldspathic base, very
imperfect crystalline ^{minute} specks of iron: fine do. -

3710

the purple
with most minute
black specks:

greyish. white, semidecomposed soft lava
with most minute black specks: is same
as (3707) but not cellular. Diana's ridge

3711

White with tinge
hard, straight texture, decomposed lava
I think so. from seeing rocks into which
it graduates. but as far from
sun. - Upper series



laminated. veins formed by section on each side.

702. like the mica from the Galapagos!!!
fuses easily.

14. color rather bright green. edges transition
from into white glass; few small
vesicular cavities. heavy rock

15. Different from most true pileolite
fuses into jet black glass.

16. friable with ease under fingers, form
shape of particles. it is easy to tell they
have been bits of shells.

19. particles of volc. matter or shells, etc.

21. to more than half inch thick. must
have been entirely enveloped

22. with vein common core of Septaria

23. Calcareous nodules not so compact
as the concentric rings.

15 the rock is fine grained greenish brown crystalline structure
no character would be called. trap rocks

3712. 3713

X with

3714 X free

crystals

of

from

3715 X. fine

many

3716 X 1/2

to 1/2

3717 Do.

3718 } the

3719 } hand

3720 } Meta

3721 X Calca

3722 Do.

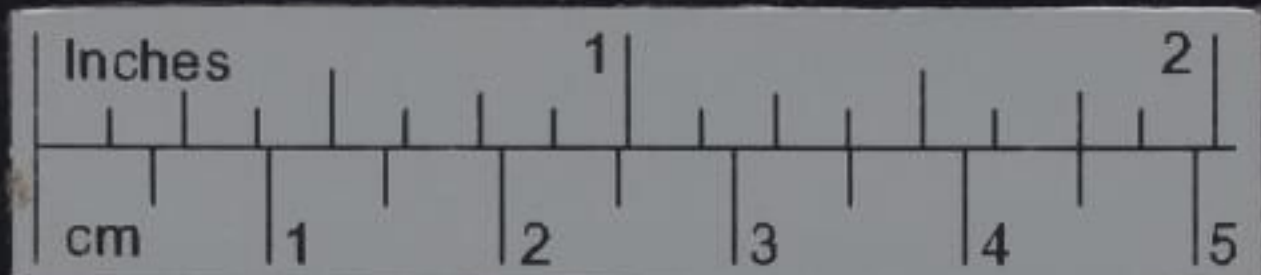
3723 } =

3724 X Pelu

3725 X a m

3726 } nucle

3727 X parti



43

St. Helena

3712: 3713. Light soft. ^{near white, soft. fine} ~~fine~~ ^{fine} tuff? ~~fine~~

X with singular ferruginous veins. -

3714 X Green. rather harsh base, with few crystals of glassy felspar & acicular mass of Hornblende. (I believe specimen came from dike lower series). -

3715 X Singular. Black glassy coating to many of the dikes. near the Barn.

3716 X Soft calcareous. - Volcanic sandstone in particles & scarcely any trace of organic remains

3717 } Do. with calcareous matter dispersed & then run over & through the particles. hard, compact. Semi-conch: fracture.

3718 } Helachite Limestone. in bed of stream ^{from the}

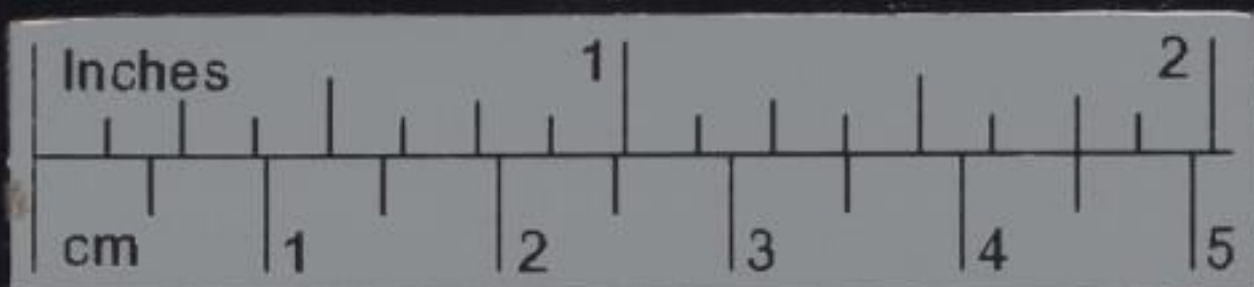
3719 X Calcareous. Mm: soft. sandstone. from base of Sugar

3720 Do. soft, with many minute particles of a land shell. - Scarce aggregates

3721 X Pelite. coated with Torrea rock

3722 X a small fragment of cinder, thickly so coated

3723 nucleus Calcareous matter with few Volcanic particles. coated with Do



3733 - Black enamel

32. Black enamel

36 I cannot see any lent cyst.

3724 gy

3725 : 3

3727 gm

egg

3728 . 1/2

B.

3732 x Com

slts fld

3733 x do.

3734 Br

from

new

do

3735. Bla

with

open

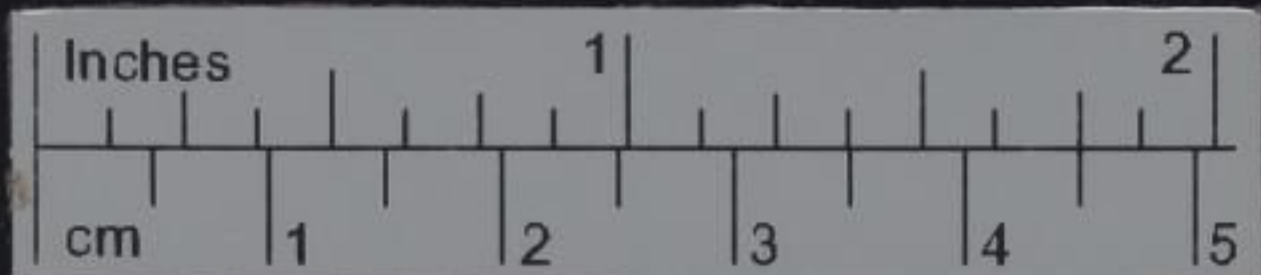
3736. Pear

felds

tramp

rule

slip



St. Helena

44

3724 Gypsum, mingled with earth. -

3725 : 3726. Bulimus. Flagstaff Hill

3727 young Bulimus. Pupa. & Helix & egg of Bulimus? from do. -

3728. Bulimus presented to from Mr

B. Seal. Flagstaff hill height 1700 ft.

Ascension

10m

3732 X Compact ^{crystalline light} grey stone with crystals of feldspar: base of cricket ground

3733 X do. from do. base blacker. -

3734 Brown. totally from do as nt. to ^{5 or 6 m} from under the fingers, aggregate of volc. ashes. with few bits of pumice

3735. Black. highly vesicular, basaltic lava. with most minute cypst of glass. Feld: upper ^{10m} ^{which} ^{appears} ^{as if} stream. beneath under a green hill

3736. Pearl. whitish & brown. granular base of feldspar. & atom-like black crystals, containing cypst. broken & bent of glass. Feldsp. from feld & glass white. -



8739. Black chapel

38. with few yst of dark chond
slfs f. ^{around} the little cavities.
a crenulate patches. the stone
is more crystalline & of a yellowish
colour. appearing mottled
to rock

40 outer part more finely vesicular
than inner

41. mass of them cypst are rounded, as if they
had been rounded by the flowing lava;
fused into black glass

dark green
crystal

3737

Bro

tr

o m

f-t

3738.

Cr

crystal

fel

are

3739.

Bl

resid

a v

3740

Bl

3741

Bl

with small cypst

sh

sh

3742.

Wh

Relief

will

the measurement

89° 30'

along

90° 45'

hor

face

to

but



45

dark green
enamel

As can be seen

partly dark, lustrous, irregular

3737

Brown. hard lustrous. fine grained feld.

rock. interlocking very few cryst. minerals
& irregular vesicular: underlying thef-the more modern stream, ^{near} center of Is. -

3738.

Compact dark grey, ^{semi = coarse} ~~finely~~ ~~homopne~~
feld. lava. with small cumulated linear
cavities. - from near last. -

3739.

Black basaltic base, small
vesicular & amygd. with glass fels par??

a very modern stream. SW extremity

3740

Black scoria. part of Bomb. from Is.

3741

Black. base highly vesicular. with ~~many~~
small cryst of glass feld. & ~~striae~~. modern
stream near settlement. -

3742.

White granitic looking rock. gneiss

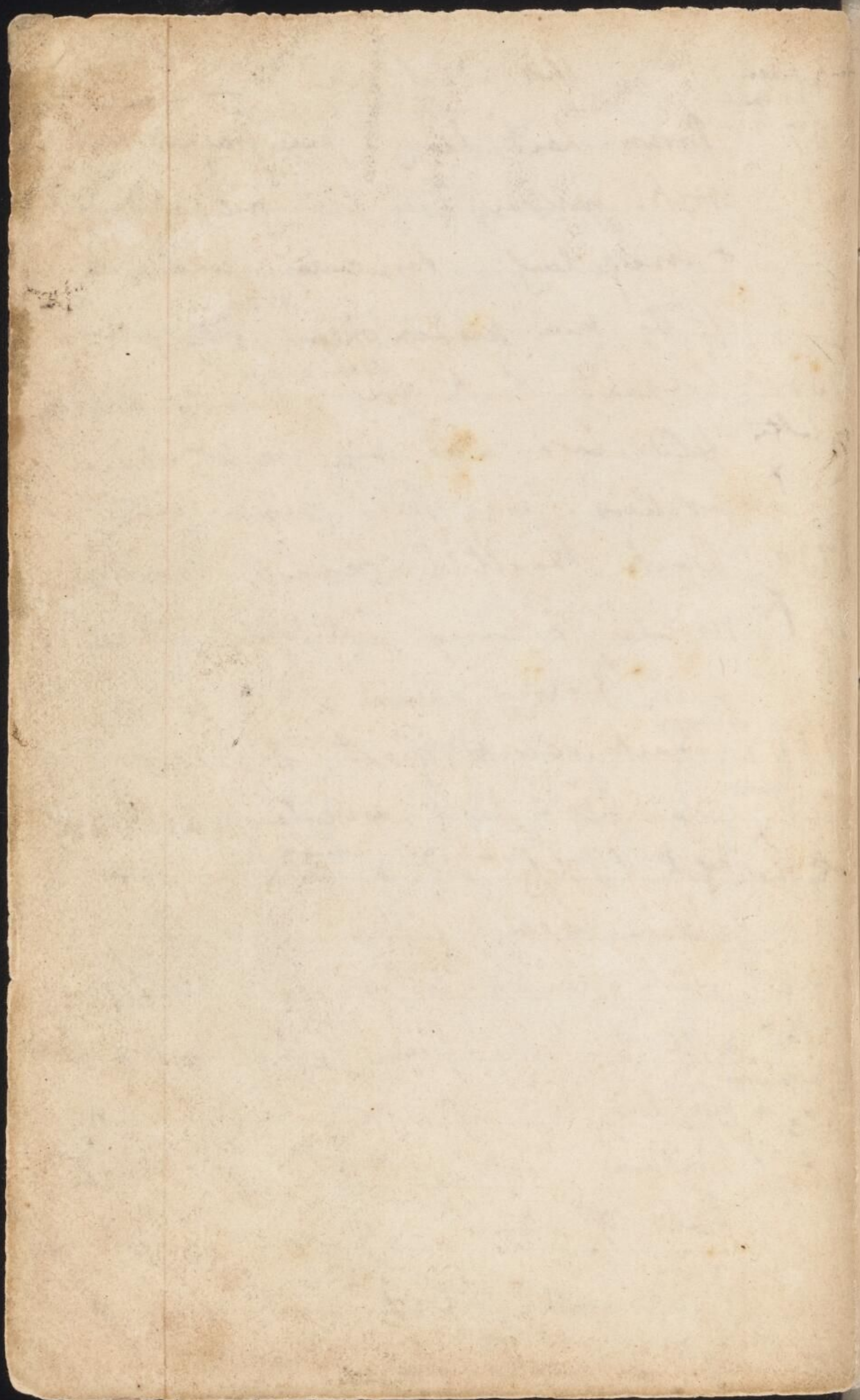
Telapae

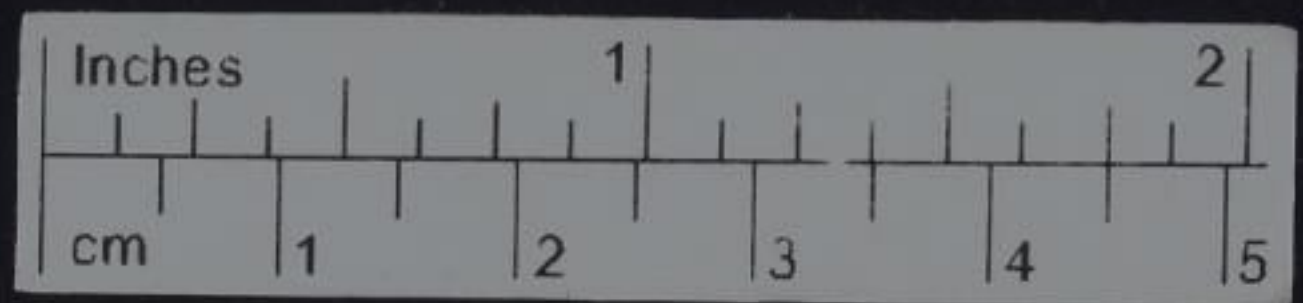
with cinders green hills: cryst of fels

89° 30'

90° 45'

elongated, semi-opaque; the mica or
hornblende. Black with tinge of green
fused appearance; quartz or what appears
to represent that mineral. seems to differ
but little in nature from the Telapae.





MS. DAR. 236. 3:

Back Cover

