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Ottawa.

feathers & furs & Enquiries but little as to the methods by which they were supplied.

In 174 . Russian navigators discovered the Komandorski Islands & in 1786? the Pribyloff Islands, & it was found that these northern lands, because they had remained unknown & inaccessible to the aborigines had become the favourite breeding places of the fur-seal of the North Pacific. They were also frequented by great numbers of Sea otters, which were quickly driven away or exterminated by the hunters. The fur seals, because of their habits, were more constant & when the more valuable animal became scarce attention was devoted to their capture. They were killed on the islands to which they resorted to bring forth young, at points

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HARRISON MILLS Name

recklessly & indiscriminately,
afterwards with [redacted] precautions,
but always commercially. In
1867 the U.S. acquired Russian
America under the appellation
& renamed it Alaska. The
Pribyloff Islands fell to their
share, but in the purchase of
Alaska ~~the fur seal industry~~ the
fur seal industry of these
islands was not regarded
as an asset of value (Refs)
A few men who had special
knowledge [redacted] went to the Pribyloff
Islands & in 1868 killed a
few hundred of seals — as
many as they could skin & salt.
After a transition period, the

part of the U.S., under
circumstances which have not been
too clearly explained, [illegible] the
right to kill seals upon these
islands by a company, fixing
the number to be killed each year
at a maximum of 100,000, but
subsequently established very
[illegible] restrictions of supervision
or control over the killing. The
actual methods may have been
somewhat improved as compared
with those existing under the Russian
regime, but the principle remained
the same. The original
two arguments were advanced
by justifying the killing of so many seals
as it was an experiment which
had not been tried
by the Russians or since their

fact uncontrolled methods of Kelly had been abandoned. The theory under which the regulations were framed was, that no females should be killed, & that the animal being polygamous a sufficient number of males might be annually destroyed without injury to the stock. All this depended upon the idea that the seals could only be killed when they resorted annually to the land to bring forth their young.

after a great cycle of time, the human race,
first known, according to best authorities,
somewhere in ~~Asia~~ Western Asia or in Eastern Europe,
expanding & diverging in all directions &
throwing off branches wherever land & practicable
seas offered the occasion, ~~&~~ blindly completed, in
accordance with the ~~physical~~ dominant
physical features by which it was bounded,
the great circuit of the globe. This is one
of the most ~~great~~ events ~~of~~ recorded ~~history~~ written
history, for its records ~~are~~ must be sought for
~~in the~~ on the tablets of inscribed stones of
Assyria or Egypt ~~in~~ or scraps of clay or among

the invocations of principal deities. They are written in the letters of voyages, projects & charters of which more than all ~~which~~ that deserves notice remains. Not long ago, as measured by the generations of men — some six generations — Columbus discovered the Continent of America, or if other ~~less properly~~ kn stories are to be believed, that continent was discovered by the Norsemen a few years earlier, without important result. Either way it was by Columbus, Cabot, Jacques Cartier? & others about that time that the Eastern & western migrations of man were brought face to face.

The fringe of the expanding human race had

always consisted of a multiplicity of wild tribes at war one with another & all with the rude aspects of nature. Thus was continued battle for the very means of existence & every man held his life in his hand & did not shrink from venturing it on small occasion. When the means of living was abundant & the area of separation limited the competition of man with man produced feuds & religions. & this perhaps between sects originating religions. Perpetual conflict & practice led to organization became organization became necessary to existence & thus in the western Asia & in Europe where we placed to manner civilization grew up, letters arose, & men then

any man in a lifetime can learn, has been written. Not so to the eastward. — Here the ~~coast~~ habitable land was vast but ~~poor~~ much of it was poor. When the growing volume of humanity surged into India & ~~China~~ Southern China it entered blind leads & in each of these cul de sacs the contact of man with man produced peculiar & complicated webs of society. But the main migration continued to the eastward through northern Asia by scattered tribes & bands. It finally crossed the narrow space to the continents of the new world & overspread there. So at least we believe, for there is no evidence which will bear scrutiny of American

Autochthones.

For how long America may have been peopled we have no measure. If there exist any written or sculptured records they are modern frauds & bad. & the clue was there is lost, but when America was "discovered" from Europe, its history began. The European, armed with a numbered devices & with a moral code which had by degrees been perfected while the American was passing his long & lonely migration was brought face to face with the rude to antler & the ages, still armed with his pristine implements of stone & bone. The story with weapons in his hand

but with the Christian faith upon his lips, met the weak, who professed nothing but a reverence & dread for the aspects of nature, a delight drawn from the sun & the satisfaction of his appetites.

Did the Celtics
or the armies of
Europe prevail?

## Transcendental Seals.

Now that the question of dust
of conflict before the Court of
Arbitration at Paris has cleared
away, it may be possible to
review in the light of fact &
ordinary common sense some of the
questions relating to the National
History of the fur seal of the
North Pacific.
In the arguments of the U.S. Counsel
we have been ~~informed that this~~
~~Ursus introduced~~ & invited—
may ~~Expelled~~ impelled — to consider an
ideal animal without counterpart
in nature in the assumed
sole interest of which it has
~~been pursued~~ was seriously
proposed to confer & new principles

of International Law. (which all other interests should be subordinate) we were told (quote).

Unfortunately the U.S. had certain material interests & state further a specified position to which they had committed themselves, to maintain respecting the seal controversy, which must be allowed for in the consideration of the florid & lengthy arguments of their representatives before the tribunal. The naturalist will not refer to these arguments for information of values in respect to the animals under dispute. But in ~~once~~ examining the documents

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furnished by the U.S. in this
case, it is ~~X~~ unfortunately
apparent that South of ~~the~~ Naturalists
who have been called in the Case
~~X~~ of that Country are
nearly as ~~unpatriotic~~
patriotic as the paid Counsel
& scarcely better scientific men naturalists.
It is unnecessary here to mention
names, but reference may be
made, by such as desire
to do so to (see pp)

Whenever & wherever wild
animals are to be pursued &
killed, ~~X~~ whether they be fur-seals
or hair-seals, sea-Elephants
or Whales, the operations of the

hunters must be accompanied by a certain degree of cruelty & a certain disregard of the "rights" of the lower animals. No allusion is here made to the still more refined cruelty of the statesman who pursues his enemy merely in the way of sport & without the incentive of necessity or the argument of daily bread.

It is not known, however, that up to the time of the present arbitration, arguments based on cruelty or alleged cruelty to the lower animals & depending on distinctions too subtle as those which may be drawn between killing by means of clubs on land & killing by

Shooting of sea birds has been seriously advanced as grave matters for international consideration.

It may be said, — all this shows a great advance in the degree of consideration accorded by man to his fellow-creatures — but let us ~~[illegible]~~ friendly minds? Count & look at the facts. It is useless to endeavour to apply a code of drawing room ethics to the rude everyday work of the hunter or fisherman, or under the general conditions of the world & its commerce & action, to advance arguments which might evoke applause at a meeting of the Rationalist body the R.S.P.C.A., to the general public, who demand food

1859 – 1869

10 – 19 years

Diary of 1861 – 11 yrs

Methodical – Writes neatly keeps copies of letters written to stamp dealers & to a Swedish boy abt stamps – with lists of stamps sent for Exchange, or those obtained – Also neat notes on scraps of paper containing useful items, as description of a curious recoil gun – & directions how to make certain fireworks, & an explosive paper resembled to pass as gunpowder – Also – careful receipts of how to mix colours for painting glass for magic lantern slides – at which he worked for a long time with keen interest – & fair results

Chem – making – Photography – book binding

Old Confessions –

Tutors Latin French

Aerolite fell in the mountain on the South side of Cut-off-Valley on the morning of Tuesday 19th March 1889. between the hours of 8 & 10. a.m.

V. Jones

Mem

The fall seen by the driver & passengers of the stage coach from Clinton to Lillooet.

V.J.

No need, even if it were here possible, to follow later growth & development of scientific ideas on Geology

Purpose now, very briefly to explain the main principles upon which Geology as a science is based & more particularly the methods by which a chronological scheme of events is arrived at, the nature of this chronology & the manner in which the geological scale thus constructed is practically employed in making Geological maps.

as before said

Scientific study only became possible when it was realized that cataclysms could not be called in to account for observed facts. No successive destructions & recreations.

Study of forces now in operation & application to former history so far as possible.

Realizing particularly that these forces worked during a very long time.

Exceptions of course to this uniformitarian law.

Way ten been by widespread catastrophes at long intervals. Also conditions in early times & processes at great depths which very hard to realize.

What outline of history then do we get.

Earth originally molten globe (way they say this)

Water in the atmosphere.

And until then water condensed & lay upon the surface in seas

Can Geology be said to begin.

Seas, lakes & rivers began to wear away outstanding parts of crust.

Detritus spread out upon sea bottoms, forming earliest beds, one above the other. Lowest necessarily the oldest.

Such beds, chiefly sands, clays etc but in part also organic, laid down in horizontal layers.

Example in Ottawa

Process would soon have come to an end if no other forces.

Continued elevation of Continental areas generally slow, but sometimes more rapid & local giving origin to mountain ranges. Related subsidences.

Causes of such movements.

Originally flat beds became inclined or arched, even contorted. They became subject to denudation. Largely worked over again & redeposited.

Due to such causes that it is possible to determine the succession of beds & formations without digging or boring.

Illustrate

Following up such changes of elevation, folding, denudation & the carriage & deposit of debris etc would lead us into the whole field of physiographic geology. origin of forms of land, mountains, valleys, plains.

side Not pass the opening.

Thus easy to see that we have not
any where access to a complete
series of rock formations at any one
place.
Built up by combining many observations.
Gaps in one place filled in another.

Result

Thickness averaging perhaps 10 miles in all.
If one fossil shell, coral, bone or
leaf found in any bed, it belongs to
species then living.
Adds immensely to interest of study
particularly as nearly all are extinct
forms.

Find, bringing all observations together,
that forms of life changing & progressing
concurrently with the lapse of time.
More highly organized organic forms
constantly being produced

don't know anything more about origin of life.

"Let the waters bring forth
abundantly the moving creatures that
hath life".

Organic relat

Important to grasp the Conception that Geol. history Continuous.

Records incomplete in any one place often yet incomplete after combining all we know

But physical operations never ceased after introduction of life, progress of life pari passu ~~[illegible]~~ Lower & higher forms were ceased.

~~Concomit progress~~.

Arbitrary Subdivisions

Thus subdivisions of Geology more or less arbitrary. Founded partly on local strati graphical breaks, partly on culmination of different characteristic forms of life.

Nature of progress of life & its chief Landmarks.

Use of organic remains in determining age.

Show some fossils?

Means of Correlation & building up Geol. Column.

1. order of superposition
2. Colour, texture, mineral composition. (usually only of local value)
3. Fossils. "Take direct hold upon time" serve for correlation all over the world. Identity of fossils proves approx. identity of age.

=

Result of observation in all lands & since the beginning of scientific study of Geology, has been to build up a Scale of Geol. formations like that presented.

(explain)

=

Geological Chronology not known, a chronology of years or centuries.

Very little basis for applying such a yard-stick to Geol. time.

Some fossils longer others shorter

Can scarcely do more than guess the number of years formerly involved in the more recent changes.

The whole series many millions of years.

Idea of a long short time - Niagara.

Having arrived at such a scale of Geological formations from the study of certain parts of the world most readily accessible to us, we may employ it in laying down on the map, according to their respective ages, the rocks which appear at the surface

Turn to Geol. Map — Explain Conventional Colours & characters of the Several formations.

Local references.

In this short review it has been possible only to refer to certain main principles

Nothing has been said of volcanic action, for this compositions excepting a local, although frequently modern is responsible for the greater portion of the features of the earth.

Mountains directly built up by volcanic action.
Lava flows.
Dykes.

Metamorphism of strata. Cause & its results.
This naturally affects chiefly the older deposits, but all deposits subject to it.
Its results.

Conclusion.

Overland on the Missouri Steamer. 1891.

There's pleasure for you, in Solid Chunks!

You Know, I've had a say young lady lover & now I want to settle down & do westic affairs.

Why not come off today, so I said all right & just flew round & packed up. My first experience you know. The young Officers helped me & said why Mrs — you'll be a just a splendid Officer's wife.

Naval officers are just Stl-endid. I had two three naval officers beaux. Corresponded with them to the very last.

Well I have been one of the most reckless girls you ever heard of — just perfectly reckless. I used to dash round in a-quota, why the girls used to say why — when I see you coming just like that I just think it's the last I'll see of you.

Yes Officers each about the same age we'll get Each other by-by very quick.

No I'm not like Mrs — I'm just fond of all the parties & everything I can get up. Dance, why I can dance all night.

Bachelors, Oh I like young bachelors much the best of course. Sports a man like married, but I'm fond of Chaperon the White party now. he he he ☺ Your

(Look here. If you talk about it like that we'll think it's not true. When a man has been kissing he doesn't tell.) What Kiss & tell! —

steamer in somewhat constrained position. Felt as though had come back from a great mental depth to everyday consciousness. Dream state seemed extremely vivid. Felt as though would wish to write it down on spot, but not having paper at hand repeated the words to myself instead & looked at time. Feel sure all words as set down but one, in place of which some other may have been used, but remember idea flitting across me that form of expression not

Oh. Those quarters are just beautiful. Those little closets up stairs are what takes me. Are there eleven brothers & sisters in that family? Great — — swimming!

A tenderfoot = one who goes west for first time.

Montana. A man says Montana should have a buffalo coat & a palm-leaf fan.

Missouri Riv.
1861.

What is the meaning of this great flood-stream of life which we see around us & feel in us, flowing from the furthest time we can explore & tending onward without any limit? See how persistently Nature utilizes & avails herself of every nook & cranny however seemingly barren or frigid — covers the humid regions with uninterrupted front & spreads an unbroken covering of grasses over the great plains, peoples the prairies desolation with the bison, the forest with other creatures of the like kind, & stops every gap & chink in the great structure with some living form capable of using that which would otherwise be lost. Or, looking at the enigma from another side, we may marvel at the plasticity by which living objects have shaped themselves to suit every environment.
But what object is the purpose of this prodigious development? "life" & can we find any meaning in it deeper than the mere existence of so called inanimate objects, the contraction & expansion of rocks under varying temperatures, the atmospheric circulation, that of the waters or the circling of the planets?
Imagine immeasurable little water-wheels placed in a great river, grinding, so far as we can see no corn, turning each tile worn out, but working merely

to produce other similar water wheels, that the succession may be endlessly maintained. So all life appears to lie afloat some stream of cosmic radiation. This is probably a better illustration than that of Eddies in a stream, for there presuppose a resistant stream bed with its rocky projections which renders it impossible that the flow should be direct & uninjected, while life is Something superadded & apart from the great flux of Energy.

Quatsino
1885.

If with companions true & tried
We dare Essay Some hazard
'Tis good to know that all together linked
Shall fall, or all in one love conquer.
But if some doubtful emprise must be borne
With only three to follow
Timid, perchance not true
Success doth bring gray hairs

New. Coast
V. I. 1885.

A dreamy rocks with yearly seas worn
& storm-wrecked trees along the shore.
Of strong Sea winds which shape the clouds
In silence while the breakers roar
My point of view, this light canoe

That dips & rises in the foam,
& seeks along each surges crest
a landing place & finds it not.

---

W.P. Ry.
& Central Pacific Ry.

A Station in the parched west
Between two lines of wrinkled hills
Whose seams are dry & show alone
The finger-marks of ancient rills.
The sleepy tolling scent of sage
That floods the basking desert plain
A roar of coming wheels, a stir
Of drowsy folk to see the train
A hundred windows blinking past
& then the silence falls again

---

Northern Coast of B.C.

Shoulder to shoulder, solemn & still
The mountains abide with their fronts to the sea
Their brows bound with cloud-wreaths
That bind late & fill, the tide at their feet
& all time in their lee

Here, as the old year drops away
Into the abyss of the past,
I, builded but of earthly clay
And for a moment holding fast
On life & light,
Whose voice is silenced by the storm,
The speech & clamour of the time;
Take up my pen & writing, form
This little script of halting rime.
I, who have pondered long & sought
To find some hidden key to all,
Give up the fruitless quest of thought
And let the silent darkness fall
Upon my dreams.
The light that seemed to dawn & fire,
The hope that glimmered far away
Has lapsed into the empty skies,
Repining still to bring the day. —
What woes? — No life is linked to ruin
Save that which stood by sin we place
And what dim fickle stars still shine
Lie far, too far, in empty space.
I know not, cannot understand.
I pray perchance, & prayer be dumb
Upholding of the open hand
And waiting till the end be come.
And so the old year dies, & new

And restless hope springs from the dead
To face the ancient doubt that grew
Before old Egypt fattened Land,—
That stands for all today.

Dec. 31. 1891
(H Rm.)

Voyage of Vega. (Vol. II)

In 1871 the fur-seal about ~~Behring~~ began to diminish (281). That a wild animal can be classified in such manner is according to ~~this~~ its ~~breed~~ peculiar customs of life. The fur-seals arrive year after year during the summer to certain localities — the rookeries — where they collect in hundreds of thousands and spend several months without eating. (p. 282)

The males near the shore get from 12 to 15 females. And those ~~further~~ who are forced to go further back from the shore must content themselves with 4 or 5. (p. 284)

Study after the females have come ashore they bear their young which are treated with great indifference by the mothers and are only defended by their adopted fathers while they remain within the limits of the harem. (p. 284)

When the seals are driven by the Killers great the females and very young are driven away. all the others are killed. p. 287,

The young ones are often killed by the old ones when they are frightened and rush to the water and hundreds of young ones are killed in that way

p. 290

Merriam

1 D.

2 Nord: Roosevelt

3 Rathbone

4 S. Dahl

5 Lowndes

6 Harrison

7 Prof: Langley

8 Capt. Mahan

9 Prof: Newton

Major Powell
Geologist

Col Macdonald

Gilbert
Geologist

Meacom

Stanley Brown

Representative Oldthwaite

Gov: N. Carolina

Col Pettelton

Gen Bragg

Mendenhall

Decision given by Dr Merriam &
Prof. Mendenhall at Shoreham Hotel,
Feb. 23. 92. "For west British
Behring Sea Canons".

Diagram by
Sir G. Baden-
Powell.
Washington
1892

Diagram by
Sir G. Baden-
Powell.
Washington
1892

List of Cambrian fossils from the Rocky Mountains collected by Dr Geo. M. Dawson. 1883-84.

---

## Cambrian System. C.

(110.) Devil's Head Gap. 3/10/83. G.M.D.

In a grey yellow-weathering dolomitic? limestone.

Ptychoparia Oweni. Meek & Hayden (sp.)

The four specimens in the collected are referred by Prof. C.D. Walcott to the type of the above species which occurs in the Prospect Mountain Group as also in the Potsdam Group. (see Monogr. U.S. Geol. Surv. vol VIII. 1884.)

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(140.) Summit Vermillion Pass. 6/8/84. G.M.D.

(In a dark green indurated rather contorted & squeezed silicious shale.)

Olenellus Gilberti. Meek.

The Canadian specimen is readily recognised as being the above, but presents a slight variation in having a rather broader space between the front of the glabella & the marginal rim of the cephalic shield. This however is not sufficient to constitute a specific difference at all.

About 1 mile below the outlet of Kicking Horse Lake (Cutting on Railway) West Slope, Rocky Mts. Geol. Surv. 1884.

(In a light grey coloured slightly arenaceous & dolomitic limestone.)

Olenellus Howelli, Meek.

Nine specimens representing various portions of the cephalic shield of the above species were examined by Prof. Walcott and thus identified. Associated with which was.

Olenoides laevis, Walcott, A species from the Middle Cambrian also recognised as occurring in the Bic, Que. Specimens collected by Mr. Austen

---

Drift in Kootanie valley, 19 miles South of Upper Columbia Lake, Sept 11, 1883. Geol. Surv.

(In a light grey sub-crystalline limestone)

Olenellus Gilberti, Meek.

---

Olenellus Gilberti, Meek. occurs in the "Prospect Mountain group in an arenaceous shale above the quartzite capping Prospect Peak, Eureka District, Nevada".

---

Olenellus Howelli, Meek. occurs at Pioche, Nevada - also at Prospect Mt. Eureka District Nev. See Monogr. U. S. Geol. Surv. Vol VIII. 1882.

Cambrian Rocks
of the Mountains
Vols of paper read
before Royal Society.

see Pre. Cambr. Strata
in Grand Canon of
Colorado
by Walcott
Am. Journ Sci. Vol XXVI
Dec/83

also Abstract
Report of geology
of Eureka district
Nevada
Arnold Hague
1883

Pennants Quadrupeds
Vol. II 1793

The sea seal leads during three months in summer a most indolent life, it arrives on the islands (Com. I.) vastly fat, but during that time they are scarce ever in motion, confine themselves to one spot for whole weeks, sleep

a great deal of the
time, Eat nothing, and
except the employment
of the females here in
suckling their young
are totaly inactive, They
live in families each
male has from 8 to 4
5 females, + + + 1.282
The female generally

3

generally brings forth one cub at a time never more than two, + + +. These seals are very tenacious of life and will live a fortnight after receiving such wounds as would immediately destroy ~~a the~~ any other animal.

p. 284

Geography describes features of the Earth as they are at present time.

Mineralogy, in the wide sense, deals with inorganic substances of which the Earth is composed. — It may relate specially to the individual mineral substances composing crust, but in passing to aggregates & mixtures of minerals, of which rocks usually composed passes into lithology or petrography.

Geology allied to both, but at the same time separate — Relates to the structure & origin of the crust of the earth & of its features in so far as these come under observation.
It is in fact the history of the Earth, leading up to Geography which is its present phase.

~~The~~ From study of Mineralogy in wide sense, & more especially in its connection with ores as minerals of economic value, led to the first recognition of Geology as a branch of Science — comparatively recent.
Werner, ~~about a century ago~~, called it Geognosy meaning thereby relations of minerals to certain rocks & to distribution of these rocks.
Previously history of world speculative, but this newer interpretation drew a attracted attention.

This came about, however, only late in the last Century, that Geological ideas existed in older times confused with Cosmogony, the origin of the universe itself, more or less confused with ancient Theologies.

—

A similar confusion in these early times in regard to History which was interwoven with mythology

—

Combinations in both cases destructive of Scientific study or research.

=

The study of History properly so called affords a clear insight into the actual conditions existing between nations & races today & deduces the character of their institutions from their origin.

—

In the same way, Geology enables us to understand the relations of land & sea, of mountains & lowlands in relation to their growth & origin successive epochs of change in a manner quite different from that possible from a mere inspection of them as they exist.

—

Not intended to trace the gradual growth of rational ideas in Geology from antiquity, but interesting

Evidence that even at very early times it was not possible for intelligent observers entirely to ignore the successive changes of the earth's surface which subsequently were grouped under Geology.

The cosmogonies of India, Egypt & China, represent history of world as checkered by convulsions of nature, with interludes of tranquility. These convulsions based on conspiring local Catastrophies, floods, volcanic eruptions etc

Greek idea of successive destructions & restorations of the world borrowed chiefly from Egyptian cosmogony

These supposed efforts of nature, however, severely referred to as directed toward human race.

Ovid, Aristotle, Pythagoras & other classical writers.

At an early date fossil organisms found on mountains & far away from the sea attracted attention. Were connected with above speculations on convulsions of nature.

Some Early Italian writers expressed very sensible views as to the true nature of fossils, but prejudices stepped in. Much of middle ages spent in discussing whether they were ~~ever~~ living organisms, & if so, whether to be accounted for by the Noachian Deluge.

Towards end of 17th Century
were rational & exact views
began to be held & espressed by
a few students. Thus Robt. Hooke
speaking of fossils.
"However trivial a thing a
rotten shell may appear to some,
yet these monuments of nature
are more certain tokens of
Antiquity than coins or medals,
since the Fancy there may be
Counterfeited or made by art and
design, as may also books,
Manuscripts & inscriptions,
as all the learned are now
sufficiently satisfied has often
been actually practised; &
though it must be granted that
it is very difficult to read them
& to raise a Chronology out of
them, & to state the intervals
of time wherein such or such
Catastrophes & Mutations have
happened, yet it is not impossible"

Great advance made with Werner & Hutton's writings & teachings 1775 - 1788

—

Especially Hutton — His treatise really 1st print in which attempt to dispense with hypothetical Causes & explain former changes by natural agents.

—

Huttonian theory. "The ruins of an older world are visible in the present structure of our planet; and the strata which now compose our Continents have been once beneath the sea, and were formed out of the waste of pre-existing Continents. The same forces are still destroying, by Chemical decomposition or mechanical violence, even the hardest rocks, and transporting the materials to the sea, where they are spread out, & form strata analogous to those of more ancient date. Although loose deposited along the bottom of the ocean, they become afterwards altered & consolidated by volcanic heat, & then heaved up, fractured & contorted."

Hutton's researches led him to affirm that — "In the Economy of the World I can find no traces of a beginning, no prospect of an end."

Such a view involving a telling lapse of time was not readily accepted, but its acceptance greatly helped soon after (1790) by Smith's work in English Geology which established the Value & Constant succession of organic remains — Reinforcing demand for time.

Cambrian. including whole series from Lowest Pal. to & including whole of primordial.

(1) Lowest member. Cottonwood slates. No fossils. Dark blue, purple, green & blackish argillites 800'

(2) Second group. (mostly formation) chiefly quartzites, but much argil. material also colours, grey, green-grey, drab & pale brown, rarer dark colours. 6000 to 9000'

(3) Next. cream, salmon & white quartzites, & quartzo-felsite. 2000 to 3000

(4) Next. Thin series of green micaceous argillites 75 to 80' with Primordial & Quebec fossils.

—

In middle Nevada Cot. replaced by steel & ashen grey silicious limestones. & calc. shales, 4000'
Primordial, Quebec & later Silurian fossils Limestone called Pogonip.
In Wasatch region overlying (4) Ute limestone 1000 to 2000' wanges in[?] lack, & evidently replaces part of (3) holds Quebec fossils nearly to summit.

—

No (4) & limestones (Pogonip & Ute = series A & B. of Rocky Mt section 49 to 11.

---

Ogden Quartzites. Devonian. White, shading to pale green often saccharoidal more or less greenish clay slates & rare conglomerates. Greenish schists also in association in Cottonwood Canon p. 168.

## Geol. 40 parallel

p. 532. King makes following groups of Archaean from below up.

Succession of King.

In all 50,000 ft

1. Granitoid gneisses. Quartz & orthoclase a little mica, sparing triclinic, & chlorite pseudomorphs after garnet & mica (25000)

2. Over these, unconformably? Mica gneisses rich in quartz & biotite. Orthoclase usually exceeding plagioclase (25000)

~~3 porous of various int. slates, quartzites, limestones & dolomites. Some conglom. hornblende schists, & in one or two cases hydromica rocks~~

thrown in ? King.

3. Mica & hornblende schist, porous of int. slates, quartzites, limestones & dolomites. Sometimes ortho. sometimes plagioclase in excess. Some conglom. Hornblende schists, & in a few cases hydromica rocks (supposed unconformable with last )

Rocks of Shuswap. probably 2 & 3 = C & D overlie. My series A in part? B. & may represent metamorph. Cache Creek = Ute Pogonip Devonian ?? & series C of Rocky Mts. ??

# Triassic

Westward of Wasatch beds
disappears bet meridian of 117° 20'
reached in Western Nevada.

Comparison of E & W. Triassic
p. 343 et seq.

DEPARTMENT OF THE INTERIOR, CANADA.

GEOLOGICAL & NATURAL HISTORY SURVEY.

*Alfred R. C. Selwyn LL.D., F.R.S. Director.*

MUSEUM & OFFICE, SUSSEX ST OTTAWA.

*188*

# On the Cambrian formation in the Rocky Mountains.

General Character of rocks

Stratographical relations.

Uncomformity in southern part of region

Fossils comformity in Northern.

Zone of red rocks in southern part of region.

Characters of these rocks.

Important part played by the Cambrian rocks, being so far as known fossil in the no fossils region.

Time of deposition of these rocks.

Hector. 49th parallel survey.

Discovery of fossils in 1883.

In 1884 by self in Vermilion Pass.

By B. Assn in K.H. Pass.

~~Comparison w~~

Fossils so far = Prospect Mt Group or Olenellus beds. As low as any from the Eureka district in Nevada

—

In Grand Canyon

Zoroaster
Chuar
Grand Canyon Group

Those in bottom rocky ridge

probably = 2 latter.

1878

1878

April. 30. Make final arrangements
Set see completed copies of report
from printers, of which three
sent to Mr Meredith, one to Mrs
Selwyn, one retained in office
& one taken by myself. Write to
Mrs Meredith & Selwyn.
Start with Rankine by 9.45 train
westward, Bernard seeing us
down to Station.
May. 1. Arrive in Toronto before
noon. Call Selwyn at Station
to see Rankine. Go with him
round the town & get back to
Station too late for train. —
Telegraph to Pellman to
put bag and parcels out at

Port Huron, when our baggage would be detained by Customs. Had lunch at Queens Hotel. Went up to Wilson's but found them out. Visited University & walked about the town. Returned to Wilson's but still from home. On way down Yong Street met Miss W. & returned for Dinner. Talk, back to Station & wait for 11 o'c train. Very sleepy & glad to get into Pullman.

May. 2. Set baggage on arriving at Port Huron, & pass customs without difficulty. Arrive at

Chicago about 8 Rem, & finding that must stay over about 12 hours either here or at Omaha, decide to stop here. Check hand parcels at station & walk up to Fremont House. Take a stroll around the streets in the evening but long sleepy so early to bed.

May 3. Take a walk about principal streets & return to station for train at 10.30 Am. Find Robson (C.P.R.) & Messrs Rosse, Cornwall & McDonald en route for Brit. Columbia.

May 4. Reach Omaha a little behind time. Get pullman

baggage rechecked &c. Write
letter to Wendelth asking if possible
to get loan of Steam launch
used in Victoria Harbour
dredging, & if so at what rates.
Request him to telegraph & write if
anything can be done.

May 5th Across the Sherman
Summit & out upon the
Laramie Plains

May 6. On to Ogden
arriving on time & leaving
after an hour & a half on
C.P.Ry.

May 7 Running down the
Humboldt River Valley.
Day warm & dusty.

May 8. From the Sierra to San Francisco, arriving in good time. Eve. went to Baldwin's Theatre & saw the Daniels & Joaquin Miller.

May 9. About town on business all morning & visited mint. Rm. to Oakland & Berkley visiting the University & seeing Profs. Stearns & Prof. Le Conte. Eveng to the Chinese Theatre with Mr. McDonald & R.

May. 10. Completed purchases & business in San Francisco Drove down to Steamer Dakota & Set off for Victoria punctually at Noon. Fine weather.
May 11, & 12 On passage to Victoria fine weather Calm or favouring winds.
May 13. Sailed Esquimalt harbour at 6.30 Am after a remarkably quick & pleasant passage. Got Carriages to Victoria & put up at Driard House. Find Florence still here. Get luggage up &c about various matters of business. Enquire about Craft. Find Douglas not

yet here but had given
him time to the 15th.
Enquire about other Croft-
in Case he does not turn up.
May 12-17 Victoria
looking after equipment-
& making preparations.
Douglas not arriving on
15th made arrangements
on following day with
Capt. Sabolson for Schooner
Wanderer. Sig. 7 May
17. dine at Mr McDonalds.
Sunday May 19. Church &
Run for a walk to Beacon
Hill + Ogden Pt.

May 20 Business of various kinds in connection with outfit

May 21: Morng about town on business. Aftn. walk to Survelance [?] Aforme [?] at Indian reserve Esquimalt & hunt for fossils. Evg. walk out to McDonalds.

May 22. Morng as usual going about various letter affairs, Aftn. Go Esquimalt to Croquet at Gov. Richards stay for dinner at which Capt & Mrs Robinson, & Miss Daport.

May 23. Enquired about Sails which it now appears

Cannot be finished before Saturday. Had hoped to So off on Friday. Visit Schooner which was nearly ready. Tell Mrs Charles he may have chimney to boot on the Queens Birthday.
Ran for a drive & scramble to top of Cedar Hill with Mrs McDonald. Eng. row on the harbour.

May 24 Queens birthday holiday making everywhere interfering with work on Sails &c. Mary walked to Beacon Hill & Closes Rb to see Base Ball match & rifle firing. Ran. up "the arm"

with a party of Mrs Robertsons including Dupont, Powells, Porters &c to see the races & regatta. The Indian Canoe races specially interesting from the excitement & fun with which the competitors went to work. Got back about dark. Eng. Called on Mrs Bowman.

May 25 - Find it will be impossible to get away on Sunday morning as had hoped owing to non completion of sash & Carpenters work. Make arrangements which I think will secure completion of work & enable us to get away on

Monday morning. Set Supplies
Shipped down to wharf &
preparations as far as possible
Completed. Eve. dine with
Reitt & a party of friends.

Victoria Oct. 18.

Got all stores specimens &c onto Schooner, having previously made arrangements to have them placed in one of H.B. Stores on Wharf. Settled accounts with Wellcome & Kenly & Indian Johnny. Attended to various other matters of business.

Eng. dined at Judge Begg's, meeting a Dr & Mrs Harrington there.

Oct. 19. To Nanaimo to get Carpenter sent down to take flooring of our Schooner. Secured a number of empty totes for specimens & had them sent

down to store. Packing specimens all morning with Charley. Store closing at 1 P.M. - very Saturday - permits work after lunch. Interviewed several people on mining &c. & took a turn in China quarter to look for China. Dined at Judge Crease's. A thick wet stormy day.
Settled with Sabiston today, & glad to get rid of him.

Oct. 20. Down to Stories to get Sabiston to sign a new receipt, the old one being defective. Dr Tolmie arriving at 10 A.M. went with

him to his house, & remained there covering & working chiefly on Indian Vocabularies until 4 day. Dinner about 4 P.M. Drove back to Town before 6. Had a cup of tea & set to work on correspondence &c. A fine but cool day.

Oct. 21. Packing specimens &c & working bit particles left. Removed boxes from room in Carleton House to H.B. store. Saw Mr Fawcett & Deans on 2 C.I. anthracite Eng. spent rest in Woodcock gallery notes on Gold Hz & Omineca country. A steady

down per 9 Cold rain
nearly all day.
Oct 22. Down to Wap to see
about Carpenter closing holes.
Writ Mr McKay (HBC)
Examining specimens. Looking
over specimen & plans of Hows
Sd Copper Mine writ Roscoe &
others. Writ Messrs Finlayson &
Heisterman Examining plans
&c of Baynes Sd. Mine.
At Sands & Wakes Office
looking for plans for maps.
Call at McDonalds but
find no one at home. Looking
over plans of Steidgate

Coal mine at Fawcetts.
Theatre.
Oct. 23. At Wharf & Superintend Carpenter closing & addressing boxes. At Sands & Works Office getting trace of Okanagan & Spallumcheen region. Afterward back to Sands Office to look over maps & plans there. Send a number which it will be well to have traced. Collect Judge Greys & Governor Richards, & stay to dinner with latter. A mail & papers this eve. from Montreal.
Oct. 24. At Sands & Works Making tracings. Rec'd visit Dr Dolmage & Harold Wells

Telling Haida to obtain
wrote Hunter & Robson
on Survey from Dock &
Pringles to Grande Prairie.
Authorizing same if possible
to get work done under
$120 to proceed if he
can find a Surveyor. Asking
Robson for transfer from
C.P.R.
Eng writing to West Huson
& T.H. Hawley.
Oct 25 Up at 6 am
& down to Esquimalt
with Capt Gowdy to see
Bark Hazelhurst, which

about to forward to Geneva with Chinese passengers, & freight. Breakfast on board & on return go out to Dr Tolmie's. At work on Indian matters till 5 P.M. Drove back with Dr T.

Oct. 26. At Lands & Works Office till afternoon tracing maps. After lunch determined sextant index errors. About town on various little matters. Dined at Duponts' with Mr & Mrs Fellows, Mr Burns & Miss Martineau.

Oct. 27. Going over things in hotel, packing & making list of what left. P.M. for a walk to

Beacon Hill. Evening Jerry over Indian settlers & getting list of questions for Mills. Saw Capt. D.E. Sturt of Tekada Island marble quarry. He took me to see samples of the marble in a store. Said on Government Street. Says there is Coal on mainland inside Tekada Island. Sandstones extend about 9 miles along shore S.E. of the Indian Village. Coal seam a mile & so inland where he saw it 1 foot thick burns well.

Oct. 28. Called on Archdeacon Wright, having understood that he wished to ask about some Indian matters. Booked for Dakota on Wednesday. Got tickets from H.B. taken down to Warp, Consular certificates, Bills of lading &c for them. Found lot of specimens from Manitoba in bonded warehouse. Paid bills & transacted various business about town. Met Dr Tolmie after lunch & for over Hour & a half, but Indian mills did not turn up. Went down to Indian quarters to look for him, but unsuccessfully.

Met Mr Fawcett to discuss D.C. Arthur at mine.

Eng. Written notes & letters wrote Bowman, W Duncan, & Rev Mr Collison.

Reading.

Oct. 29. Paid for ticket to San Francisco. Paid various bills. S.S. to us down to H.B. store, & Blankets returned to C.P. room in Custom House Building. Called at Lands & Works Office. Lunched at McDonalds.

Rec. Some Dr. ark, Spencer on
photos, & Dr. Tolmie's.
Dined with Kate boards with
Mrs Morgan. Packed up
everything. To bed at 12.
Oct. 30. Paid hotel bill
Sent Webber on Reports,
Left for Supernaturalis
Bowmans buggy at 10.30,
Left in S.S. Dakota punctually
at noon, passing inside
Race Rock Light, & almost
Cape Flattery about dark.
Magnificent View of Mt. Baker
& the serried peaks of the Coast
range. Clear sunny day
most beautiful Steamer
Sunset on Cape Flattery &

Vancouver shore. A thin passenger list & plenty of room everywhere.

~~Nov 1 & 2~~

Oct 31 Nov 1. On "Dakota"

uninterrupted fine weather & calm seas

~~Nov~~ 2. Arrive at San Francisco, getting ashore about 10 a.m. after a pleasant & uneventful journey on "Dakota". — To ~~Dick~~ Horne, engaging rooms. To bank with Kenyon. Run at Woodward's Gardens & walking about streets. Evg. Call on Morgan at Palace & go with him to see section of "Big tree" on view in Market Street.

Nov. 3. Travelling by Central Pacific Ry

Nov. 4 Travelling by C.P. Ry. A tedious & uninteresting list of passengers occupy most of day in Reading

Nov. 5. Comfortable breakfast at ~~Abraham~~ Ogden. Travelling all day on U.P. Ry. A Corporal's Guard of Soldiers put on board at Supper station in case of attacks on the train by desperadoes

Nov. 6. U.P. Railway

Nov. 7. Arrive at Omaha, or rather Council Bluffs, which is the terminal station. Arrange about sleeper & embark on C.B.&Q. Ry

a good dinner in the Dining Car, with plenty time to Eat it.

Nov 28. arrive in Chicago 5.40. go & see Palmer House, & take a walk round the Streets with Vernon, who leaves by the 5.15 train for New-York. Get baggage rechecked to Montreal. walk round the streets looking at Shops & endeavouring to pass time as my train does not go out till 9 P.M. Telegraph home at 5.15. Leave by Michigan Central train at 9 P.M. having previously dined at

Tremont Hotel Restaurant.

Nov. 9. Breakfast at Detroit Junction. Dinner at Stratford, Supper at Toronto, where we arrived a Minute started a little behind time.

Charge on P.O. pr do .25

Nov 7. Pullman

| | |
|---|---|
| Omaha to Chicago | 3.00 |
| Porter | .50 |
| Lunch 2 meals | 2.00 |
| C B & Q Ry 1 meal | .75 |
| Nov 8. C B & Q 2 meals | 1.50 |
| Porter | .50 |
| Papers & (a) | .05 |
| Candy &c (a) | .50 |
| Baggage Chicago | .25 |
| 1 meal Chicago | .60 |
| Pullman to Montreal | 5.00 |

Nov 9.

| | |
|---|---|
| G.T.R. Detroit Junction 1 meal | 0.50 |
| G.T.R. 2 meals | 1.00 |
| Papers (a) | .15 |

Nov 14 Paid W.B. Whitely
Advances on Specimens $12.71

Subscription to Colonist (a) 4.00

Oct. 30.

Holt 45.50 3.50

Washing at Quard Ho 1.50

"Woodwards" .50

Ticket to Montreal, & Sleeper to

Ogden 143.00

Pospero .25

Holt 4.50

Supper (a) 1.25

Nov 3. Porter .25

~~Breakfast~~ Coach to Station & baggage 1.00

C.P. Ry 2 meals 1.25

Fruit (a) .25

Nov 4 3 meals 3.00

Nov 5 Porter .50

Nov 5 C.P. Ry 3 meals 3.00

" 6 " " 3.00

oct 24. Indian Wells

Vocab. (a) 0.50

Drawers (a) 2.75

oct 28. Marvin rope r 2.00

Consular Certificate 1.00

Drayage & wharfage 2.00

Freight on box of specimens
from Montreal r 5.00

Storage on boat from 8/5 - 34.00

Portage on books .40

oct. 29

Carriage fee to Sycamore 2.50

Paid Allison for Pelican 10.00

Passage to San Juan 20.00

Noble & Charles 2.75

Book (a) 1.50

Express & Wharfage 1.00

Photos of Indians (a) 1.00

| | |
|---|---|
| Vict. Oct. 18. Cartage | 0.75 |
| Tel(a) | .75 |
| Barber(a) | 1.50 |
| Paid Williams Advance | 168.71 |
| Paid C. Hamann Advance | 169.91 |
| Indian Skins | 40.75 |
| ~~Sk~~ Meals 2 men | r 1.00 |
| oct. 19. | |
| Boxes for Specimens | .75 |
| Agnello (a) | .25 |
| oct. 21. | |
| Cartage | .30 |
| Paid Charley 2 days packing Specimens. | 4.00 |
| China tea-set (a) | 8.50 |
| Paid Oppenheimer for oil | 2.63 |
| Oct 22 Brush & Comb (a) | 2.00 |
| Theatre (a) | 1.00 |
| Robertson opinion r | 2.50 |

Cowet 3 m. above
the Mission on the Pentledge
River. Fossils abundant
according to Dr Ash.

Sandstone & marble on
~~river~~ river between 2 lakes.

Iron ore deposit on N. End
of Walker group.

Amongst Bella Bella
Islands. About W. End
of Denny Id. Coal Crops
Enquire at H.B. Establishment
Milbank Sd, where "Salander"
& Beaver used to cut wood.

Small streams running
into Hardy Bay N. of
Rupert. Small coal crops
float.

Back of Clickseeuy a prominent hill. N. Small stream coming down from it Crop of Coal. near Nt.

---

Nt. S. of Nimpkish in Beaver Cove. Marble. Claim taken out

---

From Nimpkish River to head of first Lake Lake 5 m. up from coast 20 m. long. River 2 days poling up, then another lake 9 m. Cross ~~high~~ divide & strike Nootka River to Nootka. 3 days & a half through.

Coal about St Rupert.
First found in Mr Neils Harbour
Worked at Saagwash
Same rocks seen on to St Rupert
Runs down to Mouth of Kumpkish R.
Coal also seen in Drury
Inlet of Hart, on Continental
Shore. Said also that
on outer Coast near Laylor Pt.
Said also to be seen on River
on Wakeman Sound.
Shustartie bay some
Coal Croppings. ??
~~Inlet~~
Bay S. of Klaskino Inlet
& N. of Woody Pt. Cape Cook Sheet
Stream. Outcrop of Coal

click seam. 3024 m. up
Outcrop of coal

H. H. Bancroft.
San Francisco
Cal.

~~Remit to Allison.~~
~~- sold to Bacon~~
~~Newspaper Office~~

advanced Williams
Aug 27 $10

advanced Charles Aug 27
$10

advanced Spafford
Aug 27 $4

V ~~wrapping paper~~
~~axes.~~
~~Nails screws &c.~~
X ~~Kitchen pot.~~
Beef
o ~~Envelopes~~
o ~~Gum~~
o Corner of Yates & Wharf Sunbirn
~~Figures. Letter to Wentworth~~
~~Hd canvas.~~
Ascertain date of sailing of
Cordet & Nanawar mails.
~~Cash bk.~~
Bank business
~~Toilet~~ Soap
wash basin.
~~Cartridges & revolver cartridges.~~
~~knives.~~
~~Jacket. Files~~

x ~~Rockets~~

~~Surveying Chain~~

x ~~Camp stool~~

\+ 2 ~~Canvas blanket bags~~

~~Butcher Knives~~

~~Boat hook~~

~~sail~~

\+ ✓ ~~Sieves~~

~~2 wooden buckets~~

✓ + ~~Hone~~

Needles palms + 2

~~Ham~~

✓ + ~~Copper wire~~

\+ ~~Parallel rules~~

Sketch Block

Gebrauchsanweisung with Sebastian drawn out.

~~Estimate Supplies~~ x

Bags

~~See Pierce~~

~~See Powell~~

~~write Harrington. re assays, museum~~

~~of memo. in report, proof of map.~~

~~lot of rocks to forward. Harmon. to~~

~~forward~~

~~Mr.~~

J. C. Ward

~~Send copy of Mines & Minerals to~~

~~Russell. S.S.~~

~~Send list to Bernard~~

~~Camera~~

~~Boat~~

~~Fellows 11.45~~

~~Boot Laces~~

× ~~Mackintosh.~~ ×

× ~~Write Bowman.~~ ×

~~Wick & oil for lamps.~~

Life preservers

+ ~~Nitric acid~~

~~Tools~~

~~Opossum [illegible]~~

✓ ~~Arsenical soap. Corrosive Sub.~~

+ ✓ ~~Blotting paper.~~ +

✓ ~~Gaiters~~

+ ✓ ~~Bottles for Corro Sub~~

✓ ~~Funnels filter paper.~~

✓ ~~Bottles & tubes for [illegible]~~

x ✓ ~~Write~~ ~~Jane on Connection of Surveys~~ x

Swabs

✓ ~~Scissors~~

~~Tools. nails screws. paint (?)~~

~~Pots & dishes.~~ x

~~Sola pans~~ ~~Boy Jason~~

+ ✓ ~~Shovel~~

~~Drill & Hammer (?)~~

~~Thermometer.~~

Mail arrangements

✓ ~~Dog~~.

+ ✓ ~~Thermometer for water~~

+ ✓ ~~Geol. Survey Reports Enquire price~~ ~~&c.~~ +

~~Announce collection of rocks &c.~~

Barometer from C.P. Ry (?) (?)

✓ ~~See Elwyn~~ +

Blankets &c

✓ ~~Alcohol jars~~

+ ~~Stove cutover's outfitting~~ of Craft

~~Indian goods~~.

✓ ~~Medicines~~

✓ ~~Supplies Estimate & obtain~~

✓ Men.

+ ✓ ~~Miner's pick~~

~~Dynamite~~?

✓ Ascertain time & means of
communication N. HBCo &
~~[illegible]~~ by "California"

~~[illegible] from HB Co at Wassoot~~.

Victoria.

? ~~Telegram or letter from Meredith~~
~~See Johnie on Sloop.~~

~~Candy bottles~~
~~Alcohol.~~
~~Preservative solutions~~
~~Plates W.P. Slow.~~
~~Camera repair~~
~~plant boards~~
~~Sounding lead~~
~~Deep sea lines for dredging~~
~~Cod lines, hooks~~
~~hooks spoon bait flies &c~~
~~Gun & ammunition~~
~~Rifles.~~
~~Revolver ammunition.~~
~~Snatch blocks~~
~~Boat fund set in order~~

l. A. Vernon
Clontarf Castle
Ireland Dublin

A year has turned its busy wheel
The grass is growing green again.
The sleepers sing as of old their
Their dole of sunshine & rain.

8.5.

Tent.
Bottles
Barrels
Potter & Hamilton
W.F. Express
See at Fort Calin
See Claims
Patent-log?

316 Clay N.E. Glass Co.

May 27 Redonda Hautrock

| | | | |
|---|---|---|---|
| | | Hotel Bill | 71.30 |
| " | " | Groceries Fellows | 9.75 |
| " | " | Beef | 2.50 |
| " | " | Trust. Royal Cit. Last years acct | 1.75 |
| " | " | 3 meals for men | 1.50 |
| " | " | Specimen wo flour | 3.63 |
| " | " | Cook. Carpenter work. | 40.00 |
| " | " | H.B.Co. Water Cart | 1.00 |
| " | " | Crock | .37 |

| | | | |
|---|---|---|---|
| " | 20 | McQuade Blue lights | 5.00 |
| " | " | Drills & weapons (?) | 3.75 |
| " | " | Engraving hardware | 8.25 |
| " | 22 | Books | 1.00 |
| " | " | Cards | .25 |
| " | " | Robertson - Agreement | 10.00 |
| " | " | Hibben - Charts stationery | 11.38 |
| " | " | Repairs on boat, | 17.00 |
| " | 23 | Ferry | .25 |
| " | " | Camphor, Methyl | .25 |
| " | " | Langley | 30.71 |
| " | " | Boat | .25 |
| " | 25 | Muirhead & Mann | 5.00 |
| " | " | Sport Ammunition R. | 19.32 |
| " | " | Wilson Tinware R | 35.75 |
| " | " | Marine. Rope R | 50.00 |
| " | " | Tobacco (a) | 1.50 |
| " | 27 | Stamps | 1.00 |
| " | " | Rope | 1.75 |
| " | " | Cartage & Wharfage | 1.50 |

Victoria Aug 13. Carriage & Hist 2.00
" " Wharfage on Luggage .50
" " Luggage .50
" " Share .25
" " Stamps 1.00
" 14 Ferry .20
" " Duty on pat. log 2.97
recpt. to be refunded.
" 15 Gloves & tie 1.75
" 16 Ferry .50
" " Repair on sailers .25
" " Boat Races .50
" " E. Grance. Hardware 8.75
" 17 Ferry .25
" " Plant poisons
Waitt & Co 4.75
" 18 Washing 1.50
" " Mackintosh & Hat 4.25
" " Camp Stool 1.75

| | | |
|---|---|---|
| Up. Ry | May 6 | 6 meals 6.00 |
| Ogden | Sleepers S.F. | 6.00 |
| Porter | | .50 |
| May 7. | C.P. Ry 4 meals | 4.00 |
| Papers | | .30 |
| Telegram | Carlin to S.F. for berths | 1.00 |
| May 8. | 2 meals | 1.50 |
| " | 2 " | 1.00 |
| " | Porter | .50 |
| " | Omnibus & hotel | 1.00 |
| " | Theatre | 2.00 |
| " | Papers | .25 |
| May 9. | Paper | .10 |
| " | Berkley & return | 1.20 |
| " | Theatre | 1.00 |
| May 10. | Hotel S.F. | 14.00 |
| " | Bus to wharf | 2.00 |
| " | Baggage " " | 1.00 |
| " | Tent & G. | 11.50 |
| " | Patent log. | 17.00 |

| | |
|---|---|
| Toronto May 1. fruit | .10 |
| Telegram | .27 |
| " May 1. 2 meals | 1.75 |
| " " Street Cars | .20 |
| " " Pullman to Detroit | 2.00 |
| Port Huron May 2 " 2 meals | 1.00 |
| M.C. Ry May 2. 2 meals | 1.50 |
| Check hand luggage Chicago | 0.40 |
| Hotel Chicago May 3. | 5.00 |
| Shave " May 3 | 0.15 |
| Paper May 3. | .10 |
| 11.92 CB & Q Ry May 3 2 meals | 1.50 |
| " " 4 " " | 1.50 |
| Porter | .50 |
| Omaha Baggage Check | .50 |
| " May 4 Sleeper to Ogden | 8.00 |
| U.P. Ry May 4 2 meals | 2.00 |
| " " " " " | 2.00 |
| U.P. Ry. May 5. 2 meals | 2.00 |
| " " " | 2.00 |

<u>Expenditure.</u>

| | |
|---|---|
| Montreal Ap. 22. Telegram to Victoria about Craft | 4.55 |
| " Ap. 24. Express charges on box of photoplates | 25.50 |
| " Ap. 27. Science Account. | 14.10 |
| " Ap. 26. 1/2 p.c. on Draft on San Francisco | .50 |
| " Ap 30. Two tickets to San Francisco | 275.38 |
| " Ap. 30. 1 ticket Sleeper to Chicago voucher. | 5.00 |
| " Ap 30 2. passages San. Francisco to Victoria | 47.38 |
| " Ap. 30. Cab moving luggage & to station. Montreal | 1.00 |
| Coburg. May 1. 2 meals | 1.00 |
| " 1 paper | .10 |

Daniel O'Connell
of Virginia City
Nevada
Offers to give facilities
for seeing mines there
R.

Montreal

Sketch for Gore Sounds Islands, Okanogan

Write Walker on reports, arrangement by which might sell at lowest price if others taken back

Papers for Gandy on glaciation &c.

Papers. McDonald
" Begbie
Grey
Crease

Write Walker on Camera

30c

Office Scratch Book, No. 5006.
FOR PEN OR PENCIL.

(1

# Nature & effects of the so Called Potlatch system among the Indians

Notwithstanding the diversity of language along the Coast of B.C., the Indians practically form a single group when regarded from the purely view of their arts & customs. The differ chiefly in relative skill in the former. The system of potlatch is probably also identical throughout in its main features. It is certainly by means the same among the Haidas, Tsimsians & Nkil tlaws. The system has however, seem to be such an intricate one that even the best acquainted with the Indians scarcely understand it in all its details & it is sometimes difficult for the Indians themselves to decide certain points, leaving an opening for Mr Hawkey with the more conscientious.

Mrs Blenkinsop, whose long acquaintance with this part of the Coast enables her to form a correct opinion, informs me that the Custom while formerly confined almost entirely to the recognized Chiefs has of late years extended to the other Indians & that Individuals are very much more frequent than before. Rev. Mr Hall bears testimony to the same effect. With the Chiefs it was a mode of acquiring & maintaining power. It is still this, but has spread to all ranks & become a way of attaining social rank & respect. Some of the younger people in the Tribes which I have visited are willing enough to abandon the Custom, but the majority are still in its favour, particularly the Elder men.

The pernicious effect of the extension & frequent occurrence of the potlatching mania Chiefs point out to be that every member of the tribe, male or female, is drawn into it & is thereby tempted to acquire property pledged to support of the reputation of their means power

Note. When a man lends out blankets he expects to get double number back in return. Should he receive less he is not pleased. Sometimes he gets a few more than double the number. In lending out the blankets & in giving them away a man gives most to those whom he knows have the intention of shortly giving a potlatch in turn.

more prominent individual. Thus wives
even rob their husbands to support a
brother or some other relative in amassing
blankets preparatory to a struggle for
social prominence, & should the aspirant
be beaten, would feel mortified & ashamed.
All become miserly & saving but to no good
result, & the great sufferings & privations
that occur when the potlatch takes place
lead not only to waste of property & time
but to all sorts of trouble.
Should, for instance, an Indian at
Alert Bay have gathered together a goodly
no. say 500 blankets & wish to make a
potlatch he may go (e.g.) to Fort Rupert
tribe & make known his intention of
giving away 1000 blankets at such a date
would not lend out his blankets, getting double number of pieces
inviting them to be present. The Fort Rupert
people are then supposed to contribute each
according to his position & may make up
in all a contribution of 500 blankets. With

when the Adelbert Bay man returns, & in due time the Fl Reports arrive. The potlatch does not then occur without much preliminary talk, ceremony & feasting, the Adelbert Bay people having to entertain the strangers. Feasts being given voluntarily by first one then another. It may also probably be that the man who is about to potlatch may not have in hand all the blankets, but have many owing to him from other members of his tribe. He sends them for their debts & the Fl Reports complaining of being tired waiting for the potlatch lend all the weight of their influence to press the debtors to pay, & then may have to borrow again to do so. At length all is ready & the blankets are distributed in proportion to the social position (i.e. the amt of contribution towards the potlatch) of each individual, much rhetorical speech marking the going on. To suppose the man who has last potlatched & again a superior position

Note. On inquiry specially find that a man changes his name every time he gives a potlatch, generally taking for his new name that of some of his forefathers, perhaps that of his father. He is then known only by his last-assumed name, which is regarded as his head & most honorable name.

the next aspirant must be able to give away more than 1000 blankets, & will struggle to get into a position to do so.

Should an Indian insult & humiliate another for any real or imagined cause he will frequently destroy a great number of blankets or other valued property, leaving his adversary in debt to that amount according to Indian law. If the latter loves the adversary to bring out a debt of a like or greater amount of property or he continues to lie under the reproach of having been insulted by his foe.

The occasions of potlatches are numerous. To protect the man potlatching wishes to assume a new & grander name to add to those he possesses already. This passes by general consent if the potlatch should be on a sufficient scale.

~~This second of Fl Rupert the head Chief Ha-ka-pun-thim~~ wishing to crush

The present head Chief at Ft Rupert, now known since his potlatch just completed as Na-ka-pun-thim aspires to & well maintains the position of premier chief of the whole Kwakiutl people. He is apparently a man of great energy of character, but naturally has many enemies among the chiefs of other tribes. One of these, the Nimpkish chief (Alert Bay) to attain a superior position to Na-ka-pun-thim, lately broke up a valuable "Copper", leaving Na-ka-pun-thim in an inferior position till he could destroy some similarly valuable piece. Not himself having a suitable Copper he collected his means to buy one which was in the possession of a young man of the tribe named Wa-nook. The Copper was bought from Wa-nook's wife's mother by his father that Wa-nook might assume an important place in the tribe. ~~He~~ The chief after bargaining & during the assembly of various tribes for potlatching

offered 1400 blankets for the Copper, but the
tender chief stood out for more. The Indians
assembled were divided into two parties
in great excitement calling each other bad
names & encouraging one side or other.
Jim Hall describes the Chief as coming out
before the people with a man hideously
dressed & wearing a mask & dancing out
& exhibiting a scalp in each hand, saying
to his rival & his friends "These are
enemies yours who I have killed & so
in the same way I will crush you".
Eventually, even before he had quite completed
the purchase of the Copper he began to
break a large piece out of one corner &
as the "Copper" was more valuable than
that previously contracted for the Chipewyan
Chief in accordance with Indian ideas pro-
claim'd himself & triumphed over him. At
this potlatch the Chief changed his name
from Sah-witti to that above given, &

as is sometimes practised evoked a pun in conversation, on which in this instance the "copper" was elevated.

To obtain a girl for a wife a young man must pay her father a considerable number of blankets, & owing to the great desire to accumulate blankets for pettotching & scarcity of marriageable females the fathers are very strict & exacting in their demands. The young man is very often further fleeced by his wife on account of some slight real or imagined grievance borne in a returning to her parents, by their advice. The father then exacts a further blanket payment for her return & so on. This all follows indirectly from the prevalence of pettotching.

The "blanket" is the recognised medium current at the present day, long before the flood of

(a-tl-la in Kwakiutl) (9

the "hai-kwa" (dentalium) & dobe good
times. So much so is this the case that
whites trading with the Indians are often
~~xxxxxx~~ forced to ~~buy~~ lots blankets in payment
& pay them back to the Indians again.

Note. Much gotten above information from Mrs
S. Blenkinsop, Indian agent & Rev. Jas Hall.
Made special inquiry afterwards from an
intelligent Indian on some doubtful points
G.M.D.

7. Sept. 1885.

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