

St John NB.
19 Aug. 1869

My dear Sir,

Yours of 13th rec^d.

I think the 10 copies of paper on
"lower coal" of Kings Co. &c - if that is
the one to which you referred - will
be quite sufficient. I would like a
larger number of that on the "Flora
of Acadia". From the contents of
Mr Dawson's note I see that I can
avail myself of their stock when
the two copies are exhausted - If his
note relates to the Botanical articles -

I am glad to hear of your
success at Gaspe and shall look
forward to a treat when you have
worked up the material -

I give a synopsis of the Upper Devonian based on more extended examinations in the Southern Hills than we had made when your former articles were published so that you may compare with the Caspe series - The order is an ascending one from: -

1 { Felspathic Gneiss (earthy sandstone ^{grit})
 Coarse granite - (Grit), conglomerate
 Gneiss - - - (Shales)

2 { Dark slates in the interior, dioritic & epidotic slates at the coast - (Bloomersbury beds)
 Silicious slate, Quartzite, flint and graphitic slates in the interior, sandstone and shales at the coast - This section contains fossil shells (Upp. Dev. fide Billings) and a few plant remains - ("Dadokylon sandstone") Leconema, Cordulites in the interior; plants &c which you know, at the coast.

(over)

3

Fine micaceous slates
in the interior, felspathic
slates, conglomerate
dioritic beds* and fel-
spar porphyry at
the coast —

"Cordatta slate"
sparingly fossil-
iferous throughout
at the coast; a
few plants in
the lower beds
of the interior basin

Coarse green micaceous
slates in the interior;
conglomerate, slates
grits, schists and
some limestone at the
coast —

"Muspee beds"
no organic
remains found

* *Lingula* & *Modiolopsis* —

The sandstones & conglomerate of St. Lepreau
& St. Andrews rest upon various upturned
beds of 2 + 3 —

Is there not here a "geological
cycle" such as you have pointed out in
other formations — First very coarse
beds indicating great disturbances, then
a period of quietness and finally a
return to conditions like those at the
beginning of the cycle —

Dr. Hunt and Prof. Bailey have
gone to Salem to be present at the meet-
ing of the Am. Association.

Very truly yours

G. M. Atwater

~~Atwater~~
Atwater

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