MINISTER OF MARINE & FISHERIES
DIEU ET MON DROIT
CANADA

Ottawa, 30th Sept 1885

My dear Sir Wm

I have yours of 26th with certificates of qualification of Mr Wm B Dawson for office of Inspector of Insurance &c They are very strong and leave no doubt of the competence of Mr Dawson and will have much weight with myself and colleagues in deciding the Matter

I am yours
Very Truly
A W McLean

Sir Wm Dawson
McGill College
Montreal

Ville Selles

Aut 1855

from inorganic matter, which animals cannot do, it would be necessary for them to have existed in some form first for animals to feed upon. Upon this I wish to lay particular stress; for animals and plants approach one another so nearly that it is sometimes difficult to say to which kingdom a body may belong, ~~but this marked characteristic invariably comes to the help of the naturalist, though not always~~ generally for

When first the *Volvox globator* was seen in the microscope it was described as a wonderful and beautiful animal organism; ~~but it has been found since~~ that it belongs to the vegetable kingdom, [illegible]

glob/

~~others~~ which some still think whilst others assert

re

tween sunlight and sunshine; for I think I shall presently show from the highest authorities that there was but little of the latter until after the Carboniferous period.

Dawson says that the Upper Laurentian and Huronian have as yet afforded no evidence of land vegetation; and he adds that he has not, after the most careful search, found it in the Upper Cambrian, although these rocks abound in the remains of sea-weed. ~~He also says that we know as yet no Silurian animal that lived on the land or breathed in air. But our knowledge of land plants, though very meagre, is important.~~ But he ~~He~~ and ~~Dr.~~ Hooker have found land plants allied to ~~the~~ Lycopods ~~or Club-mosses~~ in the Upper Silurian. ~~But~~ Before I refer to the Fossil Flora ~~them~~, I must first describe the

OLD RED SANDSTONE,

which was not at first considered a separate formation; but Sir Roderick Murchison has clearly shown its right to an

Dr. Dawson (in a letter just received) says that Prof. Lesley has found two species of Scorpion and a species of Scorpion has also been found in the Silurian rocks of Sweden

formation.

Dawson's description of the Devonian period, in "*The Story of the Earth and Man*" is so charming that I feel I must give it almost *verbatim*. He says, the period of the Lower Devonian was one of powerful igneous activity. Volcanoes poured out their molten rocks over sea and land, and injected huge dykes of trap into the newly-formed beds. The land was shaken with earthquake throes, and was subjeet to many upheavals and subsidences. Violent waves desolated the coasts, throwing sand and gravel over the flats and tearing up newly-deposited beds; and poisonous exhalations, or sudden changes of level, often proved fatal to immense shoals of fishes. Sand and mud and pebble banks were almost universal over our two great continental plateaus in the Older and Newer Devonian. But in the Middle there were in some places deeper waters with coral reefs, in others, shallow flats and swamps rich in vegetation. Herein we see

Fig. 32.—*Lepidodendron Sternbergii* (restored).

From their external structure they were formerly thought by Brongniart to belong to the Fern tribes; but their internal

Fig. 31.—*Calamites* ~~*Carboniferus*~~. (Carboniferous) Roman

A. *C. Suckovii.* A[1]. Foliage. A[2]. Ribs and Scars. A[3]. Roots.
A[4]. Base of Stem. B. *C. Cistii.* B[1]. Leaves. D. Structure of Stem.
E. Vessels Magnified.

"Especially did all these conditions culminate in the Middle Devonian when what are now the continental areas of the northern ~~hemisphere~~ hemisphere

~~Devonian~~, must have ~~therefore~~ much resembled the present insular and oceanic regions of the South Pacific."

In various localities the old-red sandstone exhibits a countless profusion of singular depressions, in the form of rings and horse-shoes. of a pale yellow colour These are small in English districts, but often nearly a foot in diameter in Scotland; ~~they are easily perceptible by their pale-yellow colour contrasting with the dark-red of the surrounding rock~~. their origin is obscure

Milner, in his "Gallery of Nature," says the superstition of the folks residing on the English borders converted these appearances into supernatural phenomena. According to their tradition, a mare and her foal belonging to the Chapelry of Sapey having been stolen by a woman, who led them down the bed of a stream to avoid the discovery of their tracks, the patron saint interposed, and ineffaceably imprinted upon the rock the marks of the animals' feet and those of the woman's pattens, as a memorial of the sacrilegious crime.

whereas botanists tell us that the various species of Ferns now in existence bear to the other species of plants the small proportion of about 3 or 4 per cent. Of these Ferns some grew