

Godman  
Hearns, Ont.,  
16<sup>th</sup> March 1881

Dear Sir:

Will you pardon the great liberty which I am taking in addressing you concerning a subject which is profoundly interesting, and which I am very desirous to master if data are available on which to base a satisfactory theory.

I appeal to you as the discoverer of the "Cozoön" in the Laurentian rocks, as the worthy recipient of the "Lyell gold medal", as the author of "Fossil Man", and as the most distinguished Canadian in the realms of Natural Science. The points which I am desirous of having elucidated have reference (1) To the condition of the interior of the Earth. (2) To the causes of earthquakes and volcanic eruptions. (3) To the cause of the existence of fossil flora and fauna in the rocks of the northern hemisphere of species only ~~at~~ indigenous to the southern hemisphere. Does the weight of evidence go to show that the Earth is a solid or a hollow sphere? If hollow, is it supposed to contain gaseous matter? Does the weight of scientific authority incline to the "igneous nucleus" theory,

or to the view of Hoppin and some others that the phenomena of earthquakes and volcanoes can be accounted for by electro-chemical agencies? As to the other question, the existence of fossil remains in the "Coral measures" and the "Sias", of vegetation similar to that of the Southern hemisphere, how do you explain it? Hoppin's "Geology and Magnetism" Chap XXI., pp., 124-127, says "There has been a general northward movement of the Earth's surface from polar magnetic influence and in northern latitudes, beyond  $60^{\circ}$ , we find the animal spoils of southern countries, and the marine exuvia of the southern seas, embodied in the rocks; but in the southern latitudes we find no remains of animals, vegetable, or shells, belonging to the northern, but those only indigenous to the neighbouring land and sea". Other authorities explain the difference which exists between the flora and fauna of the present and that of the past by supposing that at some distant period the northern hemisphere possessed a tropical climate owing to the greater heat of the Earth(?), or to changes in the relative positions of certain portions

of its surface in reference to the sun, by  
movements involving the whole globe.

If Hopkins' statements are correct neither  
of these theories would satisfactorily account,  
I think, for the non-existence of fossil  
remains of northern flora and fauna  
in the rocks of the Southern Hemisphere.

To one who like myself has no  
practical knowledge of Geology and  
only takes up the study of the Science  
as a means of mental recreation in the  
intervals of professional labor it is  
difficult to discriminate between con-  
flicting theories plausibly supported  
by able men wedded to their own  
peculiar views. Still, I have been so  
much impressed by the views of Hopkins  
that I have ventured to ask you to  
decide the question, or to direct me what  
to read in order that I may find that  
"light" for which I am in search.

The Theory of Hopkins that the  
northward movement of the earth's  
surface accounts for the existence  
of the Southern fauna and flora in

most ten weeks, and also for the  
"precession of the equinoxes" is very  
interesting, and ~~accounts~~ <sup>seems</sup> almost  
better than any ~~theory~~ other explanation  
with which I am acquainted for unravel  
the mysteries of the past. There is one  
point, however, that he does not touch  
upon, that is "glacial epoch". He shows  
how in accordance with his theory northern  
Countries, England, France, Newfoundland,  
Greenland, &c, have all possessed  
warmer climates in former times, on  
their way north, as it were; but he  
does not explain how they became  
warm again, as England must  
have done after the "age of ice", which  
ploughed over that once tropical land  
and left its monumental boulders,  
had passed away. Perhaps the changes  
in the configuration of the land, and  
the different course of the warm sea-  
currents may have occasioned the "age  
of ice" in the British isles. If not Hutton  
Theory is at fault here. Again asking you  
pardon and hoping for a reply.

J. W. Dawson Esq

Greenham

L.S.D. to the  
W. G. C. C. C. C.

Dear Sir

your obt. Servant E. Goodman