

Coldstream, Ont.

May 26. 1885

Dear Sir,

Permit me to introduce myself to you by letter. I am a public school teacher in this place and I am passionately devoted to science, especially physics. It will afford me great pleasure if you shall make some comments on the enclosed article which appeared in the Parkhill Gazette under my name. A few words have been changed.

My interest in this subject is very great and I wish the opinion, concerning this essay, of yourself - Canada's greatest scientist.

Sir J. W. Dawson, LL.D. F.R.S.
Montreal. P. Q.

Yours very respectfully,
James Ashb.

1

Age of The Ocean.

By James Asher.

When we contemplate the vast extent and depth of the ocean the question rises in our minds; What is its age? The water of the ocean holds in solution common salt and other minerals. These have been gradually carried down from the land by the rivers; the surplus water is removed by evaporation and common salt and the other minerals remain behind. Hence the waters of the ocean continually become more saline.

All streams contain salt, as may be easily shown by a chemical test. Into a goblet of river water let fall a drop of nitrate of silver solution: a white cloud will at once appear in the water. This indicates the presence of a soluble chloride: in this case it is chiefly sodic chloride or common salt.

Cayin in his work on heat says that the salt contained in the ocean would form a layer 16 yards in thickness

covering the surface of the whole earth. He also says that the quantity annually carried down by the rivers would form a layer covering the earth's surface to a depth of three ten thousandths of an inch. The idea occurred to me in 1880 that we here have a basis for forming an approximation to the age of the ocean. Supposing the water to have originally been fresh and the rate of influx the same as at present the ocean would be 1920000 years old. This number was obtained by dividing 16 yds by $\frac{3}{10000}$ of an inch.

It has been noticed that all bodies of water which have no outlet are briny. Such are The Great Salt Lake, The Caspian, The Dead Sea, The Sea of Aral, etc.

Coldstream, May 11, 1885

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May 1885

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