

they regard his arguments and mathematical demonstrations as incapable of refutation. Among these authorities may be named the following:” In the list of names there given my own appears.

The fact is that I regard the points he attacks as being beyond debate, and simply decline to discuss the matter with him, telling him as plainly as the forms of courtesy permit, that I consider his work of no value. I know personally that substantially the same is true of at least two others whose names are on the list, and have no doubt it is true of all. Comment is unnecessary.

C. A. YOUNG.

FEBRUARY 20, 1897.

[The responsible editor of this JOURNAL did not know of the insertion of the advertisement claiming the endorsement by Professor Young and others of Mr. Emmens' absurd book. He has written to the Macmillan Co. requesting that no further advertisement of the book be inserted. Ed.]

#### FORMER EXTENSION OF GREENLAND GLACIERS.

I SHOULD be exceedingly sorry to misstate the views of a fellow worker, as Professor Chamberlin\* infers that I have done, from a short abstract† of a recent paper read before the Geological Society of America, but not yet published. His editorial places quite a different interpretation upon his views from that which I had gained from a reading of his articles. After a journey of a thousand miles along the Greenland coast, he says:‡ “The inference was drawn that the ice formerly so extended itself as to reach the present coast over about half of its extent, while in the remaining portion the ice fell short.” Professor Salisbury§ states that the phenomena indicate that the ice has not recently overridden the ‘islands of the coast of Greenland,’ and moreover that it is a question if this is a possibility.

In his editorial Professor Chamberlin states: “In its bearings upon these general problems, an advance of a few miles, more or less, an inef-

fectual overtopping of a few heights, more or less, are relatively inconsequential. Our language is to be interpreted in the light of the major question whose solution we sought.” These ‘major questions’ are: (1) whether the Greenland ice was the source of the American ice sheet, which I did not suppose that anyone seriously believed at present; and (2) whether the Greenland ice ever reached ‘out into the heart of Baffin’s Bay.’

It would not be profitable to restate any of the arguments in my paper, which is soon to be published; but if this proves what it attempts to prove, namely, that angular peaks have been glaciated, and yet have remained angular, largely because they projected *into* the ice, and that, in one place, in spite of rugged, unsubdued peaks, there is perfect evidence that the ice reached beyond the present land margin, it must overthrow any conclusion concerning former ice extension that is based upon angular topography alone.

A careful detailed study of a single region proves that a land of rugged peaks has been glaciated. Is it then a safe conclusion to draw that the ‘ice fell short’ of half the coast, upon the basis of evidence from angular topography, mainly seen from a ship from five to twenty miles distant? I would go further and ask if, upon such evidence, the conclusion is warranted that the ice did not extend ‘out into the heart of Baffin’s Bay?’ Personally, I draw no conclusion concerning how much of the Greenland coast has been glaciated, nor how far the ice extended; but I do know that ice can override peaks for a long enough time to scour valleys and hillslopes well, and yet leave the peaks rugged and angular in outline; and I also know that the ice in the Upper Nugsuak peninsula region once reached 30 or 35 miles beyond its present margin, which is as far as any evidence can be found in this region. For the larger question, how far it extended, and how much coast it covered, I believe it is well to wait until further evidence is at hand.

RALPH S. TARR.

#### COMPLIMENT OR PLAGIARISM.

THE second carefully prepared plea of Professors Beman and Smith is simply a conscious

\* Editorial, Journ. Geol., V., 1897, 81.

† Journ. Geol., V., 1897, 95.

‡ Bull. Geol. Soc. Am., 1895, VI., 219.

§ Jour. Geol., IV., 1896, 774.