Certain passages of Glazier's account reveal a striking similarity in observation, incident, and phraseology when placed in parallel columns and compared with passages from Schoolcraft's 'Narrative' (editions of 1834 and 1855):

Schoolcraft, 1832.	*Glazier*, 1881.
Naiwa River.	Naiwa River.
(p. 238.) "On questioning Ozawindeb (the guide) of the Naiwa River, he informed me that . . . it originated in a lake . . . infested with the copperhead snake; hence the name."	(p. 258.) "Che-no-wa-ge-sic explained that Naiwa was a stream . . . having its origin in a lake . . . infested with snakes, to which its name has reference."
Assawa Lake	Assawa Lake (Elvira).
(p. 239.) "We were just twenty minutes in passing through it. . . . our course . . . was directly south. Ozawindeb entered an inlet, but had not ascended it far when he rested on his paddles and exclaimed 'Oomah-mekunnah,' here is the path, or portage. . . . The water was tepid. After wading about fifty yards the footing became more firm, and we soon began to ascend a slight elevation . . . where vestiges of the bones of birds and old camp poles indicated the prior encampment of Indians. The next morning a dense fog prevailed. . . . It was five o'clock before we could proceed."	(p. 259.) "We were twenty minutes in passing through the lake. On reaching its southern end we entered one of the brooks. . . . Che-no-wa-ge-sic soon pushed his canoe into the rushes and exclaimed 'Oma-mikunna,' here is the portage. We stepped into rather warm pond water . . . After wading about a hundred yards or more the soil became firm, and we began to ascend a slight elevation . . . Remains of former fires, the bones of birds, and scattered camp poles proved it to be a spot which had previously been occupied by the Indians. . . . A dense fog . . . prevented our getting upon the trail until seven o'clock in the morning."
Lake Itasca	Lake Glazier (!)
(p. 241.) "Soon out went him on the trail, and got the first glimpse of the glittering nymph we had been pursuing."	(p. 265.) "In their eagerness to get a first glimpse of the glittering nymph we had been pursuing."

Glazier states (p. 327) that Lake Glazier is in latitude 47° 13′ 25″ north; is 1,578 feet above sea level; and distant from the sea 3,184 miles. Schoolcraft states in his first edition (1834, p. 58) that Lake Itasca is 3,160 miles from the sea, and in his revised edition (1855, pp. 243 and 245) he inserts Nicollet's determinations of its latitude, 47° 13′ 35″ North, and its elevation, 1,575 feet. With the exception of the figures, Glazier's language is word for word that of Schoolcraft.

On p. 328 of Glazier's account is found an *addendum* entitled 'Meteorological observations at the head-waters of the Mississippi,' consisting of a record of daily temperature from July 17 to Aug. 2 (July 17 is the date at which Glazier says, p. 252, he started from Leech Lake). Now reference to p. 423 of Schoolcraft's 'Narrative' (edition of 1855) reveals the fact that this meteorological table is an exact copy, word for word and figure for figure, of observations taken between the days named, in the year 1820, by Schoolcraft in the vicinity of Cass Lake!

This liberal use of the statistical information gathered by others; i.e., a subtraction of ten seconds from Nicollet's observation of the latitude, and an addition of three feet to his barometrical determination of the elevation of Lake Itasca; and the exact copy of Schoolcraft's meteorological observations at Cass Lake, — afford strong evidence, in the absence of any direct statement to the contrary, that Mr. Glazier took no scientific instruments with him, such as thermometer, barometer, and sextant or solar-compass, and that he simply made a guess at the latitude and elevation of the lake with which he desires to associate his name. That his guess was a grossly inaccurate one is curiously proved by his own account. He says (p. 262): "Itasca is . . . between five and six miles in length, and from one-fourth to three-fourths of a mile in width. It has three arms, — one to the south-east, three miles long; one extending south-west from the island; and one reaching northwards to the outlet, two and one-half miles."

Now Nicollet's determination of the latitude of Itasca is of *the island* in the lake (Schoolcraft's Island), and is 47° 13′ 35″; while Glazier says (p. 327) that Glazier Lake (exact locality not noted) is in latitude 47° 13′ 25″, or just ten seconds of arc south of Schoolcraft's Island. The degree of latitude between 46° 30′ and 47° 30′ is 69.079 miles long (Coast survey report, 1884). As ten seconds is $\frac{1}{360}$th part of this distance, or 1,013¼ feet, the position of Glazier Lake, as given by Mr. Glazier, is actually *within* Lake Itasca.

RUSSELL HINMAN.

Copper River, Alaska, glacial action.

For the study of the action of water in its relation to geological changes, American students have always found an ample field at home; not so, however, with respect to glacial action, for we find our most exhaustive treatise on this subject (Shaler's) confined almost exclusively to the Alps glaciers. Let specialists in the future seek fields in our own province, where the system is probably more extensive than in any other country south of the arctic circle. I refer to that portion of the territory from Chilcat inlet up to Cook's inlet, and in especial to that portion drained by the Copper River.

How far glacial action has been concerned in the determination of the topography will long be a subject for study.

My observations were such as to cause a belief in an ice sheet that one time extended from the Alaskan Mountains to the coast; as to how much farther from the north it came I have nothing to say. It may at first be considered at variance with the theory of contemporary upheaval of this part of the territory with the ranges of the western part of the United States. If the glacial period be considered long subsequent to the upheaval, there need be no difficulty in reconciling the above. It was the ice sea, which, by its steady motion to the south, has largely assisted in giving the country its present configuration.

From Yakutat Bay to the mouth of Copper River is an unbroken face of ice extending a distance of fifty miles. How far this reaches to the interior through the gorges of the coast is unknown, though it may be safe to consider the distance equal to that of the glaciers of Copper River from its mouth. These latter may be considered an extension of the ice fronting the coast, — including the above-mentioned fifty miles, — which has been cut through by the river. There is every reason to believe that Miles's and Child's glaciers were formerly one and the same, — an opinion that is in some way strengthened by the traditions of the natives. The most southerly point of the former on the left is one mile or less from the most northerly point of the latter on the right bank; while in the river bed between are well-worn bowlders eight to twelve feet in diameter.

Furthermore, on the left bank below Miles's glacier, and opposite Child's, is an enormous glacial drift now covered with vegetation. Where this is joined to Miles's it is impossible to distinguish the drift from the glacier.

The flow of these is now from east to west for those on the left bank, and from west to east for those on the right bank; yet this is not the general course the masses had when much larger than at present. They are at present but a residuum of the once extensive ice fields now discharging along the paths of least resistance. Had not the climate here been moist and in other respects favorable for glacier making, the present site would have been occupied by only drift or moraine. Farther north, above the Chittyná on the east bank of the Copper, are for many miles terraces large and small. The smaller ones are so regularly formed as to leave the impression that they were the fronts of old fortifications.

In Blake's 'Stickeen River,' he makes mention of the scarcity of well-defined terraces, while Dall also failed to observe any in the vicinity of Sitka and the Alaska Peninsula.

I can only account for the remarkable width of the bed of the Copper by the supposition that it was excavated by the power of gigantic ice masses assisted by the eroding effects of the torrent waters from them. The volume of water in proportion to the width of bed is less than in any river within my knowledge, vet the banks, as a rule, are high and rather steep. The sources of the Copper and its principal tributary, the Chittyná, are glaciers, though small in comparison with those above mentioned.

By an examination of the map it will be seen that the Alaskan Mountains form an arc convex to the northward; hence the lines of least resistance of ice masses in moving from these mountains to the southward, tended to intersect in the present Copper valley. The result was the enormous power producing the remarkable excavations cited above.

I earnestly hope that glacial action in this district will receive early attention at the hands of competent men. A simple inspection of the maps of Alaska, however deficient in detail they are, by a student of nature will show that this locality was the scene of most powerful action, the traces of which are correspondingly clearly preserved.

North of the Alaskan Mountains I failed to observe any of these remarkable glacial phenomena, though from reports of miners they may be found in the White River region.

HENRY T. ALLEN.

Fort Walla Walla, Washington Ter., Aug. 1.

The significance of coincident weather-conditions.

In your criticism (Aug. 6) upon my article entitled, 'The significance of coincident weather-conditions,' you intimate that I have not given proper heed to 'dissimilar weather.' It did not seem to me necessary to dwell at length upon that phase of the subject in order to make my meaning plain. But inasmuch as there seems to be an entire misunderstanding, I will now say that any theory that demands, for instance, that a typhoon shall occur in New York state is manifestly absurd. The influence of oceans, and continents, and of mountain ranges, and the like, must be taken into the account. In certain latitudes storms have a well-defined character at certain seasons of the year. Thus, dissimilarity of weather conditions in different localities is readily accounted for. There are times, however, when great storms occur almost simultaneously in every quarter of the globe. My point is that such an event affords an opportunity to test the theory that there is a direct relation of some sort between disturbances on the sun and storms on the earth. If this relation does exist, the sun should be disturbed in proportion to the magnitude of these exceptional atmospheric movements on the earth. That this was the case during the storms in May, the records of the condition of the sun then made will show (see *Nature* for July 22, p. 278). Also consult any records accessible in regard to the terrestrial and solar conditions existing on March 31, 1886. It would manifestly be unsafe to generalize on the basis of one or two such cases. But when numerous instances of this sort have been recorded, it would seem quite proper to call attention to the matter, as constituting one item of information in regard to a great and complex subject about which confessedly but little is known. In the words of my article, "the truth of the theory that the condition of the sun modifies the weather on the earth can be tested by considering the case of great storms that prevail widely."

M. A. VEEDER.

Lyons, N. Y., Aug. 7.

Poisoning by ice-cream.

No chemist certainly would suppose that the same poison exists in all samples of ice-cream which have produced untoward symptoms in man. Mineral poisons, copper, lead, arsenic, and mercury, have all been found in ice cream. In some instances these have been used with criminal intent. In other cases their presence has been accidental. Likewise, that vanilla is sometimes the bearer, at least, of the poison, is well known to all chemists. Dr. Bartley's idea that the poisonous properties of the cream which he examined were due to putrid gelatine is certainly a rational theory. The poisonous principle might in this case arise from the decomposition of the gelatine; or with the gelatine there may be introduced into the milk a ferment, by the growth of which a poison is produced.

But in the cream which I examined, none of the above sources of the poisoning existed. There were no mineral poisons present. No gelatine of any kind had been used in making the cream. The vanilla used was shown to be not poisonous. This showing was made, not by a chemical analysis, which might not have been conclusive, but Mr. Novie and I drank of the vanilla extract which was used, and no ill results followed. Still, from this cream we isolated the same poison which I had before found in poisonous cheese (*Zeitschrift für physiologische chemie*, x, heft 2), and demonstrated its poisonous properties by experiments upon cats. Moreover, by adding a piece of the solid portion of the poisonous cream, about the size of a filbert, to some normal milk, and making cream with this milk, following the details of the maker of the Lawton cream, omitting, however, all flavoring, I obtained a highly poisonous cream. Does this not prove that the poison may be produced by fermentation in good milk? A detailed account of my experiments may be found in my report to the Michigan state board of health.

V. C. VAUGHAN.

Ann Arbor, August 9.