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.