heavy rain the 14th and 15th, and on the 16th records 'rain about every P.M. this summer.'

The remarkable gust of rain and wind that wrecked the long bridge over the Connecticut River, and many fine elms there and in Hadley, June 14, 1877, began as the usual darkening of more or less general and ordinary cumulo-stratus at the same centre near Williamsburg. It seemed hardly moving, with a slight sheet of rain, for a while, and then I noticed its rather rapid increase of size and motion. It expanded south-east, in shape like a ploughshare, and its accelerated movement down the hill-slopes toward Northampton became exciting to witness. There was nothing like a downward-reaching funnel; but the whole rain-cloud was near to the earth, and, for a while before reaching the river-bridge, there were, in front of the cloud, wisps of cloud that moved rapidly upward, backward, and downward, as if around a horizontal axis. After passing Hadley, it exhibited no features different from a common rain-cloud, and passed off over the Holyoke range.

Files of signal-service weather-maps may be consulted for the days above mentioned; and citizens of Northampton may recall enough to show whence the tornado came on the evening of Sept. 4, 1873. The hotel on Mount Holyoke would be an excellent post of observation to exactly locate and watch the cloud-intensifying spot above described.

H. W. PARKER.

Grinnell, Io.

Tadpoles in winter.

A few days ago one of my students brought me three large tadpoles, seven centimetres in length, from a well in a depression in an open field. The well overflows in the spring of the year, and the water this winter has been quite cold, yet the tadpoles do not seem torpid at all, but swim freely about.

I had always supposed that these animals could only live in the warmer months of the year, and would like to know if any readers of *Science* have ever found them alive during the winter.

H. M. HILL.

Watertown, N.Y., Jan. 30.

A monument to de Saussure.

The month of August, 1887, is the centenary of the ascent of Mont Blanc by de Saussure, the first to accomplish it after Jacques Balmont, the guide, whose success of the previous year had been stimulated by de Saussure's offer of a prize for the discovery of a practicable route.

The commune of Chamonix, with the co-operation of the French alpine club and others, proposes to erect a monument to the eminent geologist, physicist, and explorer. American contributions toward this object will show our appreciation of the character of the man, and the value of his work.

The Appalachian mountain club, in response to solicitation from the French society, will take pleasure in transmitting donations, which may be sent to the corresponding secretary, Prof. Charles E. Fay, at the club-room. Owing to delay in receiving the invitation, replies must be immediate, as the lists are open abroad only until the close of the present month.

J. RAYNER EDMANDS,
President.

The Appalachian mountain club,
7 Park Street, Boston, Mass., Feb. 2.

The Davenport tablets.

In the issues of your journal for Dec. 25 and Jan. 1, Rev. Cyrus Thomas, of the Bureau of ethnology, directs attention to the Davenport tablets, and seriously questions their authenticity. In entering upon this undertaking, Professor Thomas stated, that, to properly discuss the question of their genuineness, "a personal inspection of the relics, and a thorough investigation of all the circumstances attending their discovery, should be made;" and then he added, "I do not claim to be thus prepared." Probably no writer ever before set out to prepare a piece of 'destructive criticism' with so frank a confession of his disqualification for the task.

In his arraignment of our relics, Professor Thomas charges upon them these grave offences: that on the limestone tablet the sun is represented with a face, and that the artist has carved thereon the 'Arabic 8' and the 'Roman numerals viii;' that on the shale tablets there are also 'three Arabic 8's;' that nearly all of the letter characters of the 'cremation scene' may be found on p. 1766 of Webster's Unabridged dictionary, edition of 1872; and that the two forms of the 'Gallic *O*' appear together on the tablet just as given on the page of the dictionary. These are fair specimens of the arguments by which Professor Thomas attempts to controvert the unimpeached statements of the discoverers. The resemblances indicated are so trivial and purely fanciful as to scarcely attain the level of serious criticism. If Professor Thomas will take the Grave Creek tablet, or even the famous Rosetta stone, and sit down before them with his 'Webster's Unabridged,' he will find no end of similar resemblances. A single glance, for instance, at the Grave Creek tablet will reveal the 'Arabic 4,' twice repeated, and he will find his arguments equally forcible if applied to it. In answer to the accusation that the sun appears with a face, it may be said that this is not uncommon in Indian pictography.

In his impeachment of the limestone tablet, Professor Thomas then advances this argument: "The simple fact that the vault under the pile of loose stones was empty, save the presence of the relic, appears to absolutely forbid the idea of age. It is well known to all who have taken any part in excavating, that the water running down through earth, and a pile of stones beneath, will at length fill all the crevices with earth, and, in fact, all places not hermetically sealed."

It will be noticed that Professor Thomas speaks of this limestone tablet being 'under a pile of loose stones,' which is an inaccurate statement, inasmuch as the vault wherein it was placed was entirely covered by a limestone slab, now in the museum of the academy. Therefore, so far as any direct descent of water was concerned, this vault was practically 'hermetically sealed.' If water entered at all, it must have been horizontally through the wall of loose stones at the sides. The crevices in this wall were filled with decayed shells, and, as most of the water falling upon a mound would pass off on the surface, the small amount of moisture absorbed into its substance would not 'run down through the earth' at all, but instead would slowly percolate from grain to grain of sand or clay, which, having no current like 'running water,' could transport little or no earth. Apparently no good reason can be given why a vault so protected from above, as well as at the sides, could not remain empty for ages.