

The following extract is from a letter received by the present writer in May, 1884, from Paul Beaulieu, interpreter to the White Earth Indian agency, Minnesota. Beaulieu is an intelligent half-breed, and has lived all his life within seventy miles of the head waters of the Mississippi. His letter was in answer to an inquiry as to the views of the people of that section on Captain Glazier's discovery. He writes, "I would respectfully state that, according to the ideas of the people of this section for scores of years past, in alluding to Lake Itasca, which is known only as Elk Lake, or Omushkos, by the Indians, it was never by them considered as the head or source of the Father of Running Waters, or May-see-see-be, as it is by them named. I have received a map showing the route of exploration of Captain Willard Glazier, 1881, and being well acquainted with his chief guide, Chenowagesic, who has made the section of country explored by Captain Glazier, his home for many years, and who has proved the truth of his often repeated assertion, when maps were shown him, that a smaller lake above Lake Itasca, would, in time, change the feature of those maps, and proclaim to the world that Lake Itasca cannot any longer maintain its claim as being the fountain head of Ke-chee-se-be, or Great River, which is called May-see-see-be by the Chippewas. The map as outlined by Captain Glazier's guide, Chenowagesic, and published by the Glazier party, is correct, and it is plain to us who know the lay of this whole country, (I mean by the word us, the Chippewa tribe in particular, also the recent explorers for pine,) that Lake Glazier is located at the right place, and is the last lake on the longest stream of the several rivers at the head of the great Mississippi."

Now, respecting the latitude given by Captain Glazier, it may be stated that he had with him no instrument for determining latitude; and assuming that the latitude given by Nicollet was that of the southern point of Lake Itasca, not that of Schoolcraft's Island, he did what any other person in like circumstances would have done, made as near an estimate as possible, and placed the new lake in latitude 10° to the south of that given by Nicollet.

The extracts given by your correspondent from Schoolcraft and Glazier, in parallel columns, even if they do carry some slight resemblance, have no bearing whatever upon the latter's claim to have discovered a lake which was unknown to Schoolcraft, Nicollet, or the officials of the land survey. Whatever the merits of this controversy, it is most conclusive that there is a beautiful sheet of water above and beyond Lake Itasca, which the Indians and pioneers of northern Minnesota, as well as the majority of American geographers and map-makers, now recognize as Lake Glazier, the primal reservoir of the Great River.

PEARCE GILES.

Boston, Mass., Sept. 4.

#### Hibernation of bats.

In a brief notice recently published in *Science* (viii. No. 187, p. 222), of a paper on the 'Migration of bats,' which I read at the Buffalo meeting of the American association, I am reported as saying that 'there is no evidence that any forms [of bats] hibernate.' Nothing in natural history is better attested than the fact of the hibernation of bats, and I hasten to correct the error made by your reporter.

C. HART MERRIAM.

#### An easy method of measuring the time of mental processes.

Lest it should seem that I lay claim to what is not my due, I would explain that I did not know of the exactly similar experiment of Dr. Oliver Wendell Holmes with a circle of people, until Professor Bowditch called my attention to it at the recent meeting of the American association. At that time the paper printed in *Science* had left my hands. I hasten to yield any claims to priority for this method of measuring simple reaction times for the privilege of having so distinguished an anticipator as Dr. Holmes.

I must thank Professor Mendenhall for the reference to his interesting article. I find, however, that his very ingenious method resembles the usual laboratory methods much more than it does mine.

JOSEPH JASTROW.

Germantown, Sept. 19.

#### The law of volumes in chemistry.

In my letter with the above title in *Science* for Sept. 10, there occurs an obvious error, since  $1,628 \times 18 = 29,304$ , and not 30,304. The slip of the pen was the more curious from the fact that the correct figures were already printed in my yet unpublished volume, 'Mineral physiology and physiography.' The above coefficient for the formula of water is calculated from the datum in Ganot's 'Elements de physique,' that the relation between the volumes of water at 0° and vapor at 100° = 1:1,698. I hope to discuss at length the questions raised in my late letter before the National academy of sciences at its meeting in November.

T. STERRY HUNT.

Montreal, Sept. 17.

#### Cause of a recent period of cool weather in New England.

In a recent issue (*Science*, viii. p. 233) I called attention to a period of cool weather which prevailed in New England from Aug. 15 to Aug. 23, culminating on the night of Aug. 22; on which night, I now learn, frosts were observed in the lowlands near Boston.

I now desire to call attention to another aspect of this phenomenon; namely, that, while this abnormal cold prevailed at the earth's surface, at a not very great altitude above the earth's surface the temperature was above the normal, and increased during the night. At the top of Mount Washington the temperature was several degrees above the normal, and was slightly higher at the morning observation of the 23d than on the previous evening; but an absence of self-recording instruments prevents a more extended study of the phenomenon. This want was, however, supplied at Blue Hill, where a Richard thermograph at the top showed an almost continuous rise of temperature after the 11 P.M. observation of the 22d, until after noon of the 23d; while a Draper thermograph at the base of the hill, 400 feet lower, showed that the temperature fell almost continuously until 5 A.M. (about sunrise) of the 23d, at which time the temperature was more than ten degrees lower at the base than at the summit. Both thermographs showed short undulations common to thermograph curves. This fall in temperature during the night, no doubt, also occurred at the Boston signal office, since the temperature observed at 3 A.M. of the 23d was four degrees lower than at 11 P.M. of the 22d. The close coincidences between the readings of the self-record-

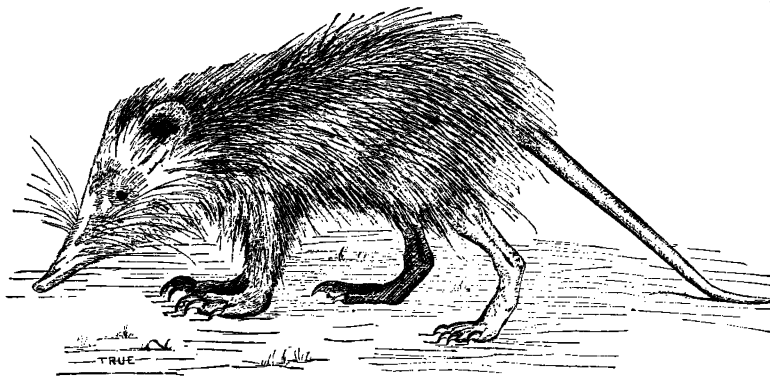
ing minimum thermometer at the base of Blue Hill and at several surrounding stations seems to show that the phenomenon recorded at the base fairly represents what occurred over the whole of the surrounding country. A minimum thermometer observed by Rev. A. K. Teele of Milton, about two miles north of Blue Hill, gave a temperature of  $41^{\circ}$ ; and one observed by Dr. Granger at Randolph, five miles south-east of Blue Hill, gave a temperature of  $44^{\circ}$ , — the same as that observed at the base of Blue Hill.

These observations show very clearly the gradual increase of temperature with height above the earth's surface:  $1^{\circ}$ , at the earth's surface in low places, the temperature fell to or below  $32^{\circ}$  F., as shown by the formation of frost;  $2^{\circ}$ , at the height of a few feet above the surface, the temperature fell to not quite  $40^{\circ}$ ;  $3^{\circ}$ , at a height of 156 feet above ground, the temperature only fell to  $49^{\circ}$ , as shown by the records of the Boston signal office; and,  $4^{\circ}$ , at a height of 650 feet above sea level, and more than 400 feet above the surrounding land, the temperature only fell to  $50.5^{\circ}$ , as shown by the records at Blue Hill observatory.

I pointed out in my last letter that on the night of

The two species of *Solenodon*, *S. cubanus* and *S. paradoxus*, are indigenous respectively to Cuba and Hayti. Of the latter species almost nothing is known. The specimens of the Cuban species recently received were obtained by John Gundlach, Esq., in the interior of the Sierra Maestra, some thirty miles from Bayamo. He writes to Professor Baird regarding them as follows: "A friend, who has sent all the *Solenodons* to Professor Poey and myself, has, after the promise of many years, received a pair of living *S. cubanus*, captured in the high mountains thirty miles from Bayamo. This animal is very rare, and difficult of obtaining, because he lives in caves which in most cases pass under great trees, and cannot therefore be penetrated into."

The female and young individual died on the way, but the male arrived in excellent condition. Though in reality a nocturnal animal, he shows no dislike of sunlight. He has been fed on small pieces of raw beef, of which he seems very fond. Some of his attitudes are quite singular: when inspecting the floor of his cage, he rests the weight of his body on his hind-legs, while the front feet barely touch the floor;



THE ALMIQ.

Aug. 22 the sky was clear, and that the air was very dry, and must have descended from above over New England, since the surface-wind blew out from this region in every direction; and the facts just given seem to clearly indicate two opposing actions on the air:  $1^{\circ}$ , a heating effect, due to compression of the air by its descent; and,  $2^{\circ}$ , a cooling effect, due to radiation, chiefly from the earth's surface. At elevated points, such as Mount Washington, where the land surface is very small, the heating effect was in the ascendancy; the temperature of the air was above the normal, and actually increased during the night. At lower stations the cooling from radiation was in the ascendancy, and the temperature of the air fell continuously during the night.

H. HELM CLAYTON.

Blue Hill meteor. observ., Sept. 10.

### The Almiq.

The Smithsonian institution has recently received a living Almiq, *Solenodon cubanus*, one of the rarest of American mammals, and the largest of American insectivores. Three individuals were captured, but only one survived.

when his attention is attracted, he raises his long, flexible snout, and advances the abundant vibrissae so that they stand at right angles with the head. Ordinarily the vibrissae lie back against the cheeks.

The specimen measures about eleven inches, exclusive of the tail, which is seven and one-half inches long. He will be sent to the Philadelphia zoölogical gardens.

F. W. TRUE.

U. S. nat. mus., Sept. 13.

### Revivification.

Your correspondent V. in *Science*, No. 187, inquires concerning the fakirs of India, and the wonders of their voluntary suspension of vitality. He will find the information of which he is in search very fully given — more fully than at any other place of which I am aware — in a small volume published in 1850 in London. Its title is 'Observations on trance or human hibernation,' by James Braid, M.R.C.S.E., C.M.W.S., etc. (London, John Churchill, Princes Street, Soho; Adam and Charles Black, Edinburgh). Both the facts and the proofs are very clearly set forth.

W. O. AYRES.

New Haven, Conn., Sept. 13.