

inquire, by means of their mediums, whether what has been dictated to us has really been dictated by them, and whether its publication has been demanded. In obtaining this permission we were assured that the spirits would everywhere assert the truth of the fact. In case this event should take place, your worship will understand its weight and importance; and this is the reason why I, always in the name of science and humanity, ask you to bring together under your supervision competent and honest persons, and, employing known spiritualistic mediums, to call forth the spirits and ask them:—

1. Is it true that at Catania a perfectible spirit, by order of his prime spirit, has dictated a work which he wishes to be called 'Spiritualistic apocalypse'?

2. Are the premises established, and the consequences deduced, from the theories and principles dictated in this work the true ones?

3. Will this work be useful to humanity? And, further, all other questions which may be thought necessary to ascertain the truth.

I likewise pray and authorize you, in the name of my friends, to invite other scientific societies, and individual men of science, to make similar experiments, with the request that you will have the kindness to communicate to us the answers obtained.

In the hope of soon having the honor of seeing your handwriting,

I remain with all respect and obedience,

Yours devotedly,

ANTONINO SCAVO VITA.

Catania (Sicily), Jan. 20.

#### Montana climate.

The interesting notes of Dr. Dawson and Mr. Davis on the origin of the Chinook winds of the north-west are undoubtedly correct. Their characteristics are exactly those of the *foehn*. But Dr. Dawson limits the range of these winds too much. They extend at least as far south as the great western bend of the Rocky Mountain divide, north of Henry's Lake; and their tempering influences reach to the extreme boundary of Montana.

In recent climatological articles in *Science*, I notice several misleading references to 'Montana climate,' as if it were comparable, in steady, extreme cold, to the winters of Siberia, or even Canada. This is far from being the case. There is no such thing as a 'Montana climate.' The climate of Port Assiniboine and Glendive is one thing, while that of Bozeman and Helena is quite another. Here seems to be the battle-ground between the cold waves descending from British America, and the temperate western currents from the Pacific. Changes are sometimes very sudden from temperatures far below zero to above the freezing-point, and *vice versa*, as one or the other gets the upper hand; but many a cold wave which extends from the mouth of the Yellowstone to the Atlantic is deflected by the pressure from the west, so as not to be felt in central Montana. The recent severe storm, for instance, kept entirely east of us. On Feb. 2, the minimum at Assiniboine was  $-16^{\circ}$ ; at Benton,  $-1^{\circ}$ ; at St. Paul,  $-26^{\circ}$ ; while it was  $+15^{\circ}$  at Helena, and  $+33^{\circ}$  at Bozeman. It was calm and mild here, and not till two days later did the thermometer reach the freezing-point at Benton. Mild weather has since prevailed throughout Montana.

The only extreme cold weather experienced here was during the January storm on the Pacific, when

we had a week of below-zero weather, with a very low thermometer, — something very unusual here, and altogether unaccountable to me, until I learned of the storm on the coast.

If it were not for the warm Pacific currents, our winter climate would probably be arctic; but those currents make it usually far milder and more enjoyable than at corresponding latitudes farther east. In 1885, when during February and March one blizzard succeeded another from Dakota to the seaboard, I gathered buttercups (*Ranunculus glaberrimus*) in bloom at Bozeman on March 15; and on April 5 I gathered more than half a dozen species of flowers (*Ammoni patens*, *Douglasia montana*, *Phlox canescens*, *Fritillaria pudica*, *Synthyris*, *Townsendia*, etc.) on a mountain side, at an altitude of about six thousand feet near the Bozeman tunnel, the highest point on the Northern Pacific railroad.

I send you enclosed specimens of what I gathered yesterday (Feb. 7): *Ranunculus glaberrimus* with well-advanced buds, well-developed catkins of alder, and catkins of willow and quaking asp, showing the white, silky covering.

P. KOCH.

Bozeman, Montana, Feb. 8.

#### Oil on troubled waters.

During a portion of the years 1839-41, the writer, as a boy, got an experience of life on the ocean in New Bedford whalers (two of them). Though a boy, I was noted for 'seeing every thing.' Being between decks one day, whilst the vessel was lying to in a storm, I observed, that, with every lea-lurch, the weather-seams opened, and let in the daylight and frequently much water. It seemed to me a dangerous condition, and I hastened to report to the officer 'of the deck,' 'on deck,' or 'of the watch.' He only laughed at me, and told me to rig the pump and pump her out, if I thought she was sinking. He said, 'The way they make a whaler is to buy a worn-out merchantman, put a new deck on and new sticks in her, and send her out as a new vessel; and you know what the Bible says about putting new and old together? Well, it oftens happens in such cases that the old hull sinks, and the deck and spars sail on as though nothing had happened. Oh! we get used to that.'

That I knew to be 'a yarn;' but when I saw a 'merchantman' laboring in a sea that was not very bad for a whaler, and learned that the life of a 'merchantman' was much shorter than a whaler's, I wanted to know why, for it seemed to me that there must be a reason for it. I found, for one thing, that whalers always made better weather than merchantmen, when they were in company; that seas would not break in our wake, that would in the wake of a merchantman; that the wake of a whaler was persistent, whilst that of a merchantman was rather evanescent; and that placid waters, or 'short seas,' are the rule on 'cruising ground,' when whales are about. All 'whalers' have their decks, at times, reeking with oil; and, although the decks are 'washed down' daily, it takes a great many washings to free them from all the oil; and much that goes out of the scuppers clings to the sides of the vessel to be gradually washed off by the sea.

A little oil goes a great way on a car-wheel to relieve friction, and it does in that case what it does on water in a storm. I think rain acts in the same way in beating down waves. The drops roll to land-