

there our party divided. Between Naples and Rome the communication was open, but, on arriving at Rome, we found very evident traces of the recent inundations, which are said to express the indignation of Providence or the delight of Father Tiber at the downfall of the Pope's temporal power. The regular route from Rome to Florence *via* Foligno and Perugia, was no longer available, as the flood had carried away most of the bridges on the railway, so we were compelled to take the other and very circuitous route *via* Civita Vecchia, Pisa, and Empoli. From Florence, after a delay of two days, during which large quantities of snow fell, we made an attempt to reach Bologna on January 9th, but our ill-luck still followed us, and we had to return whence we had come.

By the advice of some Italian friends, we decided to wait a few days at Florence before making a second attempt to cross the Apennines. Luckily we succeeded the next time in crossing the mountains and leaving Lombardy without any great inconvenience, for by this time the four feet of snow which had covered the country everywhere had been cleared from the rails. We experienced no further difficulty until we arrived at Brenner, where, after remonstrances on our part, we were turned out in a heavy snowstorm to find our way as best we could to the nearest hotel. The next morning we found that the cause of the delay was an avalanche, which, descending a very short time before our train came up, and carrying with it in its downward course trees and rocks, had effectually blocked up the line of rails. Vague rumours reached the hotel that no trains would pass for a week, that two battalions of Austrian soldiers were cutting a way through the snow, and that the avalanche was 200 yards in length, 80 feet in height, and extending across the gorge from side to side. We had no means of verifying these statements, as the telegraph wires were broken, and the officials were evidently as much in the dark as ourselves. Twenty-four hours after us the train bearing the Indian mails from Brindisi came up to the same spot, the passengers were treated as we had been, and ordered to turn out at midnight in happy ignorance of the cause of the delay. The mails were, however, sent up as near as possible to the obstruction, and thence carried over the tops of the mountains for a distance of eight miles, to a train which was waiting on the further side. The cold was intense at Brenner, and the depth of the snow confined us to the hotel. The weather, however, was only such as might be expected on the Alps, but we had good reason to fear from famine, as each successive train brought up regularly from Verona its freight of passengers, and discharged them all at Brenner, until the two hotels were full and overflowing. On the evening of the third day, as we sat at dinner, tidings came that the line was once more clear, and that a train would probably start that evening for Munich; so, thankful to quit the dull monotony of Brenner, we left by the night train, and after a delay of two days in passing through the disturbed parts of Germany, we arrived safely in England, having spent eight days *en route* from Florence.

W. A. HARRIS

#### St. Michael's Mount

In the last number of NATURE there appears a letter from Mr. R. A. Peacock, of Jersey, in which he attempts to prove that St. Michael's Mount, in Cornwall, was insulated in the eleventh century. To do this, he quotes the passage from Domesday relating to the lands held by the church of St. Michael, which he translates—"Keiwal holds the church of St. Michael," &c. Now this land, Mr. Peacock says, was 240 acres, but the area of the Mount is now only 30 acres, so that there are 210 acres missing, therefore it could not at that time have been an island, because, in the eleventh century, it contained at least eight times as much land as it does at present.

Unfortunately for this theory, the passage which Mr. Peacock translates "Keiwal holds the church of St. Michael" is really "The church of St. Michael holds Treiwal, or Treuthal," as it is called on p. 11, which is a manor in the parish of St. Hillary, Cornwall.

H. MICHELL WHITLEY

Penarth, Truro, Feb. 6

#### The Zodiacal Light

IN NATURE for January 26, in the course of an interesting account of the Augusta Eclipse Expedition, by Prof. W. G. Adams, of King's College, there is a short allusion to the Zodiacal Light, which can hardly fail to be looked on by many as being, both on account of the author and the occasion, authoritative

as well as important and instructive:—"At about 6<sup>h</sup> 30<sup>m</sup> on Monday evening (runs the article in question) we saw a brilliant display of the zodiacal light, consisting of brilliant pink streamers, stretching perpendicularly to the horizon, the planet Jupiter being just on the most brilliant streamers. Towards the north and round the horizon there were also streamers," &c.

Until assured by the author that the word "zodiacal" is not a misprint from something else, it is hardly worth while for me to point out in detail that the above description mentions almost everything which does *not* belong to the true zodiacal light, and nothing which does belong to or characterise it as hitherto known amongst astronomers.

C. PIAZZI SMYTH

15, R. Terrace, Edinburgh, Feb. 1

#### The Reign of Law

The following is an extract from a letter I lately received from a friend of mine who is on the Geological Survey of India:—

"The Duke of Argyll and his Council have determined that the leave-rules, which are good enough for the natives, are good enough for us, although they are not sufficiently good for educated Europeans, such as the Staff Corps and Civil Service, and thus they have resolved on, in spite of the Indian Government. If we could only get fair leave and pension rules, the same as men of the same rank and education receive in the other services, I do not think I should be tempted to give up field-work."

May I be allowed to inquire whether this is a new illustration of "The Reign of Law?"

TANTALUS.

#### Misadventures in Conchology

My experience seems to me curious; is it unique? I don't complain, I simply inquire.

1. As channel of communication for a foreign friend, I sent copies of his valuable conchological work to three public libraries in Great Britain. I know they were received. They have never been acknowledged.

2. I sent a complete set of shells, of a specially interesting field, to a foreign collection; they were delivered by a friend. They have never been acknowledged.

3. I sent (at his request) to a man of science a number of the rarer shells of a district. He acknowledged them through his clerk.

4. To a dealer at his urgent request and offer of exchanges, I sent a quantity (some hundreds) of shells. He sent me in return less than half what he had promised, selected from my list at his fancy.

5. To a scientific man in America, at his earnest request and offer of exchange, I sent a set of the shells of a district. No answer whatever.

6. I sent a unique specimen of a shell to a foreign conchologist for examination. I have never heard more of it.

7. At the earnest request of a dealer offering exchange, my brother sent a great number of Scotch glacial shells. His letter of request for desiderata was returned unopened.

8. A friend near me has more than once sent shells to German collectors, but has the same sad tale of packets sent, and no promised returns made.

Are these experiences exceptional, or is conchology fatal to conscience, or are *all* men liars?

VALLE

#### ON THE NATURAL LAWS OF MUSCULAR EXERTION

##### II.

HAVING shown\* that Mr. Jevons' first and third sets of experiments illustrate laws 1 and 2 of muscular action, it remains for me to apply the same laws to his second set of experiments, and to show that they also illustrate these laws.

Before doing so, a few words may be said on the subject of the *maximum* of useful effect. I have shown, from theory, that a *maximum* of useful effect is obtained in holding out weights horizontally in the hand, by using a weight which is 73 per cent. of the weight of the arm

\* See NATURE, vol. ii. p. 324.