

NATURE to know that in January 1881 I captured a single specimen of *Peripatus* in the low, damp woods at Breves, on the island of Marajó, mouth of the Amazon. The specimen is now in the entomological collections of Cornell University, Ithaca, N.Y.

JOHN C. BRANNER

Bloomington, Ind., U.S.A., September 2

THE RECENT EARTHQUAKE IN GREECE

FORWARD the inclosed copy of a report made by the master of the steamship *La Valette* in reference to the earthquake which occurred in Greece last month, in case you may not have received the report and might wish to publish it.

W. J. L. WHARTON, Hydrographer
Admiralty, September 20

Report made by the Master of the s.s. "La Valette" to the Superintendent of the Ports, Malta, furnishing certain particulars in connection with the earthquake which occurred on August 27

On the 27th inst., at 11.30 p.m., whilst in lat. $36^{\circ} 18' N.$ and in long. $21^{\circ} 32' E.$, or at a distance of 50 miles W. $\frac{1}{2}$ S. from Cape Matapan, I felt, all of a sudden, a very strong shock, which made the ship tremble, especially the engines, for the space of about 11 seconds. The ship was proceeding at the rate of 10 knots an hour, and with such shaking lost her course. The engineer thought that the screw had been lost. After the shaking was over all was right again. At midnight in the direction west-north-west, in lat. $36^{\circ} 17' N.$, long. $21^{\circ} 27' E.$, I observed on our right something like a mass of thick black smoke, which, like a cone, was rising up perpendicularly from the horizon, and at intervals changing into a reddish colour. In the meanwhile a perfect calm prevailed, with heavy sea from west at intervals. At 4 a.m. of the 28th, when the ship was in lat. $36^{\circ} 12' N.$, and in long. $20^{\circ} 43' E.$, the wind commenced blowing from north-west, which made the horizon a little clear. At 10 a.m. the mate, who was on watch on the bridge, reported to me that he had observed in the sea several stripes of a dark yellowish colour about one quarter of a mile long in the direction from north to south, which looked like shallows. The sea continued always heavy from west with very little wind. As the ship had a cargo of cattle, which suffer greatly from heat, I could not lose time in measuring the depth of the aforesaid stripes; therefore I tried to avoid them. During the navigation I thought proper to take precautions, as when I was at Alexandretta my owners informed me by telegraph of the report made by Capt. Tomlinson, of the steamer *Transition*.

(Signed) CAPT. L. AQUILINA
Malta, August 29, 1886

THE TOTAL SOLAR ECLIPSE OF 1886

WE suppose that if, some months ago now, when the question of sending out an Expedition to Grenada during the rainy season was first discussed, any one had prophesied that out of a party of eight seven would see the eclipse and record results, the general feeling would have been that such a view would have been too sanguine. This, however, is what has happened, and so far as the securing of observations and photographs goes the Expedition must be pronounced a success.

With regard to the total result, however, no one is yet in a position to speak with certainty, for some of the photographs taken are not yet developed, and others, though developed, have not been submitted to any examination. On this point, however, we need not lay any great stress, for such photographs, though invaluable as records, do not help yet so much as such pictures will certainly be made to do hereafter in the matter of solar theory, for the

reason that they are not large enough and not detailed enough.

Has, then, solar theory been advanced by the eye observations? From the sketch of the work done which appeared in yesterday's *Times*, from the pen of a Correspondent in Grenada, and which we reproduce, we think it has certainly. Prof. Tacchini's observation that the prominences seen most prominently during the eclipse were not the prominences seen by the ordinary method, and that the latter only reveals part of a very complicated phenomenon, is valuable in itself, but taken in connection with the fact that the eclipse prominences and the parts of the prominences not seen by the ordinary method are probably downrushes, wholly or partially, it is difficult to overrate its importance. These eclipse prominences, which Prof. Tacchini calls "white" prominences, are high and filamentous, and that distinguished observer, we know, does not hesitate to express his belief that the "comet" seen in the eclipse of 1882 was really one of them. If this be so, then the meteoric downpours of consolidating and consolidated materials are already *en evidence* with a vengeance, and these are the parts of the solar economy we want most to lay hold of just now.

That part of the *Times* Correspondent's letter which refers to the results obtained runs as follows:—

"The Green Island party was the only one doomed to disappointment. At Carriacou, Boulogne, Hog (or Fantôme) Island, and Prickly Point the eclipse was seen and results secured, although at these places even it was touch and go, the sky being cloudy everywhere. Carriacou was most highly favoured. During the totality the sky was cloudless, though the sun was covered one minute after the rim re-appeared. At Fantôme Island the last 40 seconds, and at Prickly Point the first 50 seconds, were lost. At Boulogne the clouds were still more persistent, and cut off 70 seconds of the totality, although Mr. Turner secured some observations during the four minutes before and the five minutes after. The presence of cloud during totality is a more serious matter than it might appear at first sight, for not only is the time reduced during which precious facts may be recorded, but pre-arranged programmes are interfered with, and it may be necessary to change them in order to meet the altered conditions. This requires a rapid and wise decision.

"Before I attempt to give any summary of the general results obtained, it may be remarked that the kinds of work attempted as a rule by eclipse expeditions are four in number, and are very distinct both in their methods and results from each other. We have first of all new facts, or new views of facts, which experience shows us are always obtained at such times, though they are not sought for as such. Next comes the testing of views which have been put forward to explain and harmonise the results previously obtained, and this part of the attack becomes very important when there are rival hypotheses in the field, the superiority of one of which can be established by a few critical observations. The third kind of work is the testing of the new methods of obtaining facts, the introduction of new instruments, or of new or improved ways of using old ones. Only in this way can a complete and perfect system of eclipse observation be built up. Finally we have the application of the ordinary methods of obtaining records, which for the most part are photographic. Astronomers not only want to study the phenomena of each eclipse to get at the physical and chemical structure and nature of the sun's atmosphere, but they want to note the changes from eclipse to eclipse, in order to see which phenomena are liable to variation, and the extent and period of such variation if it exists.

"Now in the eclipse observations secured in Grenada and Carriacou a distinct advance has been made along all the four lines to which reference has been made. New