

But, to a cool-headed landsman, this will appear so astoundingly incredible, that nothing short of the most searching scientific investigation and rigid experiment can give it even a tinge of probability. Either this apparently transcendent miracle is capable of a rational explanation and demonstration, or it is a myth and a delusion. To my mind, the use of the oil-bag upon the ocean is strongly suggestive of the idea of applying a liver-pad to a cyclone.

It is of no avail to quote Pliny or other mere chroniclers, ancient or modern, or to pile up the inexact and awe-inspired tales of seafaring men. I admit that the history of the notion is interesting, like the history of the acceptance of any other prodigy; but there is a wide difference between the progress and persistence of a belief and its scientific truthfulness.

Now, I do not pretend to have seen all the evidence which the hydrographic office has collected or published on this subject, and I shall not undertake to say that relatively large masses of oil, spread upon comparatively small bodies of water, may not, under some circumstances, modify or prevent the formation of waves. But that oil filtered into the raging and turbulent deep at the rate of a quart per hour, — or even a gallon per hour, as reported in the letter printed by you last week, — should prove to be an adequate cause for the marvellous effects attributed to it, is, to me at least, a thing utterly and absolutely inconceivable; and I confess to a disturbance of my faith in any institution that gives such stories credence or currency.

C. F. Cox.

New York, Jan. 24.

The collapse of the theosophists.

Permit me to take exception to the article entitled 'The collapse of the theosophists' in your issue of yesterday.

I have no contention with any statement, correct or otherwise, which the article contains, and offer no argument *pro* or *con*; but I beg to be allowed to use this occasion to protest against and to obviate the prevalent misconception that 'Blavatsky' and 'theosophy' are synonymous terms, or that either the manners or morals of any individual theosophist necessarily represent the methods, objects, and purposes of the theosophical society.

In my judgment, the 'collapse of the theosophists' is a prediction much safer to make after than before the event; there being, to my knowledge, no organized body of psychical researchers in the world less likely to verify any such prophecy.

ELLIOTT COUES, F.T.S.,

President Gnostic branch, T.S.,

President Amer. B. of C., T.S.,

Member Exec. C. of India.

Washington, D.C., Jan. 23.

Nectar-secreting plant-lice.

Oregon is the place for nectar-secreting plant-lice. During the past fall I received twigs of spruce and willow from that state, which, though not more than six inches long, contained at least a tablespoonful of crystallized sugar, which was both pleasant and sweet. This insect is a species of *Aphis*, and though possibly not equal to the bee, or to the manufacturer of our best cane-sugar, in her power to form an excellent article of sugar does surpass greatly the

glucose factories in the quality of the product which she turns out.

A. J. Cook.

Sea-level and ocean-currents.

The value of the conclusions arrived at by Professor Ferrel in his article in *Science*, No. 155, headed 'Sea-level and ocean-currents,' depends largely upon a statement made by him; viz., "The recent important determination of the coast and geodetic survey by levelling up the Mississippi valley and across to the Atlantic coast, that the mean level of the Gulf of Mexico at the mouth of the Mississippi is about one metre higher than that of New York harbor."

An item so important in ocean dynamics for comparison of facts with theories should be known to be most unquestionably correct. I am not aware of any official publication of the coast and geodetic survey to which the above statement could be credited, and, what is more, such a line of spirit-levels has never, to this day, been executed by the survey. Probably a paper read before the American association at the Philadelphia meeting in September, 1884, gave rise to the supposed fact. On p. 446 (vol. ii.) of its Proceedings, we find, "Height of bench mark at St. Louis above mean tide at Sandy Hook 3 feet" (*sic*), and, "Precise line of levels from Gulf, by Mississippi River commission, along the river, shows an elevation of the Gulf of Mexico, near the mouth of the Mississippi above mean tide at Sandy Hook, of about 40 inches." Here the responsibility is placed on the commission.

By permission of the superintendent of the survey, I make the following extract from a report by me, dated May 24, 1883: —

	Metres.
1. Height of coast and geodetic survey bench-mark at the St. Louis bridge above the average or half-tide level of the Atlantic at Sandy Hook, N.J., as ascertained from six years of tidal observations.	126.91
2. This bench-mark was placed at the same level as the so-called St. Louis city 'directrix.'	
3. From precise levels executed by the Mississippi River commission and the U. S. lake survey, St. Louis city directrix above the Greenville, Miss., bench-mark (on bank building), according to letter from commission dated May 18, 1883.	86.185
4. By coast and geodetic survey levels, Greenville bench-mark above the Hampson bench-mark at Carrollton, La.	37.267
5. From Humphreys and Abbot's work on the Mississippi River (1861), p. 110, it appears that the Hampson mark is 8.06 feet or..... above the level of Lake Pontchartrain, which is said to be at the same level as Lake Borgne and Bayou St. Philip, and hence with that of the Gulf.	2.456

Putting these figures together, it would appear that the Gulf level is about one metre above the level of the Atlantic at New York. The report further comments on this result: "While there is nothing impossible in this result, the difference is greater than I [the present writer] expected from the conditions of the case, but it may possibly be greatly reduced when precise data come to hand; and, in particular, more evidence is desirable as to the connection of the Hampson mark with the average Gulf level. We have no checks at present."

It is evident that no probable error can be assigned to the alleged difference, and that the amount itself is greatly in need of confirmation, which it is hoped will soon be reached through the direct line of levels started by the coast and geodetic survey to run from its Illinois line to the shore of the Mississippi Sound.

C. A. S.