

hair, but having in other respects the characteristics of natives attacked by leprosy. Making inquiries from one of the principal native revenue officials at the place, it was ascertained that there was a family living hardly a mile away, of which more than one of the members had been born, and continued, white all their lives. That this did not result from their being lepers, and that none of their neighbours were in the least afraid of them, though opinion was not quite clear as to the whiteness not being disease.

Losing no time, it did not take long to reach the hut in which this family of albinos were to be found. They are of the Hindu blacksmith caste. The father and mother are stated to be of the ordinary blackness of natives of India, but were not seen on this occasion. A son, aged twenty-two, was there working at his trade, with the white colour, features, and light flaxen hair of a European, the only difference being a coarseness of the texture of the skin, and a slightly vacant expression. There was, beside him, an apparently elder brother, quite dark, and a native Hindu in every respect. It was said that albinos had occasionally appeared in the family, one of the uncles, for instance, having been white.

On being questioned as to whether there was any difference between the albinos and ordinary natives, it was at once said that the former could not stand being in the sun, which reddened and inflamed the skin, upon which the remark fell from the writer that it would be worth while to transport such individuals to a cold climate, where they would be exposed to no inconvenience. And so it would, because there can be no doubt that one of these white Hindus, early taken, and educated in a European climate, would from palpable observation of the specimen now described be absolutely indistinguishable as a native of India.

Evidently some cause has interfered with the production of pigment in the cells of the skin, with the effect of rendering the albinos highly sensitive, and more so than a European, to the invisible heat rays of the spectrum, which are so injurious to the constitution in India.

The contrast between the faces of the brothers was peculiarly striking, for there was sufficient resemblance, in the lower part of the face especially, to show there was a distinct relationship—that of the one who was dark wore the ordinary mild composure; but the other, by the mere change of colour, had completely and inadvertently thrown off the Oriental mask; and it would be almost impossible to convey to any one, not seeing it exemplified, how vast a change could be made by so simple an alteration, displaying the way the real individuality of race is lurking in an extraordinary manner beneath a tropical blackness.

India, February 24

A. T. FRASER

#### Far-sightedness

THOUGH I have already published a note on the subject in a Dutch paper (*Tijdschrift van het Aardrijkskundig Genootschap*, February, 1885), perhaps you will kindly allow the following lines to have a place in NATURE, because those who are occupied in the trigonometrical survey of British India may take an interest in the matter, and be able to give more particulars about it.

In a paper on Mr. Whympers travels in Greenland, which appeared in *Australasia*, t. xii., 1884, I found in a foot-note the following remark:—"The reader might be astonished on hearing that I [Mr. Whympers] could see a mountain at such a great distance (about 100 English miles); but I may add that the day before I saw two other mountains 40 and 150 English miles distant; with one exception this was the greatest distance at which I have ever been able to make out objects."

Since I have not found any other reports in which it is expressly stated that objects were seen at a greater distance, I presume I may allege my own experience. While occupied with the trigonometrical survey of Western Java I sometimes had an opportunity of seeing objects at a very great distance, though, under the circumstances I was in, I had no time to look for them on purpose.

The greatest distance at which the angular points of triangles of the first order were from each other was about 105 kilometres; no difficulty ever arose from the distance, and no difference was made whether signals or heliostats (square mirrors of about 3 inches side) were observed.

When on Gng Karang (Bantam) I made out Keizerspik (Sumatra) at a distance of more than 110 English miles, though not quite easily, the top just peeping out from the slopes of

Sebesic; if there had been a signal on Keizerspik at that time I think I could have observed it.

The greatest distance at which I remember ever to have seen an object was noted during my stay on Gng Tjikoraj (Preanger Regentsch), when I made out Gng Merapi (Java) most distinctly at a distance of about 180 English miles<sup>1</sup> and I suppose that Gng Lawu was also visible (225 English miles distant), but I could not quite distinguish it from the group of mountains of which it is one. It is, of course, from high summits that objects are seen at the greatest distances, and objects which are more elevated at a greater distance than such as are close to the ground.

I think it would be interesting to gather experiences referring to the subject made in different climates and under different circumstances.

EMIL METZGER

Stuttgart, March 23

#### Krakatoa

SUPPOSING that the underground noises heard at Caïman-Brac on Sunday, August 26, 1883, were not only synchronous with, but actually the same as, those caused by the great eruption in the Straits of Sunda, it does not seem to follow that the sound-waves were propagated through the whole diameter of the earth. On the contrary, the question is at once raised, at what depth below the surface did the disturbances occur which found such destructive vent at Krakatoa? And if only the time-record east and west were accurate and satisfactory, there would seem to be some datum supplied for approximately estimating this depth. The centre of disturbance may have receded from and become inaudible at the Caïmans in proportion as, on the 27th, it found final vent at Krakatoa.

HENRY CECIL

Bregner, Bournemouth, March 30

#### The Recent Aurora

THE "Sunk" lightship is in electrical communication with the Essex coast, being connected thereto by a telegraphic cable 8'984 nautical miles in length, laid from Walton-on-the-Naze in an easterly direction. The electrical condition of this cable is ascertained daily at 10 a.m., by means of tests applied at the shore ends. Until the 15th inst. these tests were very regular and satisfactory, but on the morning of that day it was found to be impossible to obtain any satisfactory results, owing to electrical disturbances produced in the cable by some external influence. The electrician on board reported that the weather was very fine and summer-like, sea perfectly smooth, with variable light airs, and he could in no way account for the effects the electrician was observing on shore. Between 9 and 10 p.m. those on board the lightship observed in the northern sky a very brilliant aurora, from which at intervals two very bright columns extended upwards to the zenith, and there apparently joined.

I send you these particulars as they may be worth recording in connection with the aurora seen at Christiania on the same evening, and described by Mr. Sophus Tromholt in his letter to NATURE, published on the 26th inst. (p. 479). There can be no doubt but that the aurora seen at Christiania was identical with that noticed by the men on the lightship off Walton-on-the-Naze, and, although it was not visible until the evening, it was evidently affecting the electrical condition of the earth on the morning of that day, and was the direct cause of the electrical disturbance in the cable. Since that date the tests have been as satisfactory and regular as before.

WILLOUGHBY SMITH

March 30

#### THE COSMOGONIC THEORY OF M. FAYE<sup>3</sup>

M. FAYE has expounded his theoretical views on cosmogony in the several publications named above, and in his book he has also treated of the historical development of cosmogonic theories. We shall in the present article confine our attention to that which is original in his speculation; and we recommend the

<sup>1</sup> In the junction of triangulations of Spain and Algiers the greatest side is about 270 kilometres.

<sup>2</sup> "Comptes Rendus," 1880, vol. xc. pp. 637 and 1246.

<sup>3</sup> "Sur l'Origine du Monde," Pp. 257. (Paris: Gauthier-Villars, 1880.)

"Annuaire pour l'an 1885, Bureau des Longitudes." Pp. 757-804. (Gauthier-Villars)