

et quelquefois de la moitié du corps hors de l'eau. Elle était ronde et épaisse et paraissait plus massive que nos plus grandes vaches. . . . Un de nos matelots nous assura que ces animaux avoient les pieds, comme vous pouvez voir dans la figure que voici."

This figure, however, except for the toes, which resemble fins or webbed feet, is unmistakably the hippopotamus! (See "Voyage et Aventures de François Leguat," vol. i. p. 35; Londres, 1708.) Leguat did not apparently consider it a manatee, for on p. 93 he gives a full description, with plate, of the lamentin or manati, which "se trouve en grande abondance dans les mers de cette Isle" (Rodriguez). The skin is "noirâtre."

Père Tachard plainly calls the hippopotamus the *vache marine*—he is speaking of the Cape: "on voit dans les grandes Rivières un animal monstrueux, qu'on appelle Vache Marine, et qui égale le Rhinocéros en grandeur" ("Voyage de Siam," vol. i. p. 78; Amsterdam, 1688). The plate accompanying is the hippopotamus, and we know that the Dutch colonists have always called this pachyderm the "zee-koe."

Kolbe ("Caput bonae spei hodiernum," p. 167, Nürnberg, 1719) speaks of the "zee kuh," the "meer kuh," the "zee pferd," and the "kuh fisch," all of which he appears to consider different names for the hippopotamus, notwithstanding that "in dem Tartarisch meere grosse Küh-Fische schwemmern, die grosser als unsere Kühe in Europa waren, aber weder Schuppen noch Hörner hatten." This must be the dugong, surely.

Bogaerts ("Asia," p. 105; Amsterdam, 1711) distinguishes between "zee-paarden" and "zee-koiën."

Dampier's mention of the manatee is probably well known:—"While we lay here (Blewfield River, between the Nicaragua and Veragua Rivers) our Moskito men went in their canoa and struck us some manatee or sea cow. Besides this Blewfield River I have seen of the manatee in the Bay of Campeachy, on the coast of Bocca del Drago and Bocca del Toro, in the River of Darien, and among the South Keys or little Islands of Cuba. . . . I have seen them also at Mindanae, one of the Philippine Islands, and on the coast of New Holland." Then follows a full description (see Dampier's "Voyage Round the World," vol. i. p. 33 *et seq.*, also pp. 2, 9, 41, 381, 463, and 547; London, 1729). Dampier also points out that the so-called manatee of St. Helena is really a "sea-lion."

Cape Town, August 4

W. HAMMOND TOOKE

Time Reform in Japan

THE following communication may perhaps interest your readers.

On my return home from America and Europe, I presented a report on the resolutions of the International Meridian and Time Congress, held at Washington last year, to which I was sent as a delegate. A Committee was appointed to discuss the matter contained in my report, and reported favourably. The following decree was issued on July 12, 1886, under the Imperial seal:—

(1) The meridian passing through the centre of the transit instrument at the Observatory of Greenwich shall be the initial meridian for longitude.

(2) Longitude shall be counted from this initial meridian in two directions up to 180°, east longitude being + and west longitude -.

(3) On and after the first day of the first month of the twenty-first year of Meiji (January 1, 1888), the time of the meridian of 135° E. shall be used as the standard time throughout the empire.

D. KIKUCHI

Science College, Imperial University, Tokio, Japan

Tremblement de Terre du 5 Septembre

L'ÉBRANLEMENT des couches terrestres, qui peut être considéré comme la suite du tremblement du 27 août, a eu son centre dans le Piémont, dans les environs de Suze, au pied du Mont-Cenis. Le phénomène a été composé des secousses suivantes, qui ont toutes été très-faibles dans la Suisse.

Secousses préparatoires. 4 septembre, 11h. 35m. soir (heure de Berne) Colombier (Neuchâtel); 5 septembre, 8h. 16m. soir, Briançon (Hautes-Alpes, France).

Grande secousse. 5 septembre, 8h. 55m. soir. Nous en avons des observations de Bienne, Berne, Lausanne, Morges, Genève, Vevey, Aigle, Villars-sur-Ollon, Bex, Mouthey, Troistorrens, Sion, Savièse.

Secousses consécutives. 5 septembre, 11h. 55m. soir, Genève; 6 septembre, 4h. 10m. matin, Mouthey (Valais); 7 septembre, 4h. 43m. matin, Genève. F.-A. FOREL.

Morges, 12 septembre

Lunar Rainbow

A BEAUTIFUL lunar rainbow was plainly visible here for a few moments last evening. The eastern sky being clear, the moon looked fully out from behind dark clouds in the west at a moment when rain was falling lightly. Turning quickly away from her light, in the hope of seeing a bow, I was not disappointed. A semicircle of pale, whitish light, was projected against the eastern sky, much smaller in diameter, apparently, than a sun-bow, and without any traces of colour.

Reflecting on the circumstance that repeated efforts have never, previously, enabled me to see a lunar bow, although the conditions necessary for its formation are common enough, I am tempted to think that the phenomenon can only be seen when the atmosphere is unusually clear. The light issuing from the bow is so faint that the slightest mistiness of the air intervening between itself and the spectator is probably sufficient to, practically, extinguish it. Last night the air here and over the Channel was extraordinarily pellucid, lights on the French coast which are hardly ever seen being plainly visible, while others, nearer neighbours, flashed with most unusual brilliancy.

D. PIDGEBON

Arthur Villa, Hythe, Kent, September 6

Aurora

THE aurora seen in Ireland on July 27, and described in NATURE, August 5, p. 312, was visible in this vicinity. It was the finest observed thus far this year, with the exception of that of May 8. Other dates on which the aurora has been seen in this locality recently are as follows: June 29, June 4, and April 14. It has been noted that these appearances of the aurora have been coincident with the return of the disturbed area on one side of the sun (see NATURE, July 22, p. 278), and likewise with widespread and violent storms.

Lyons, New York, August 25

M. A. VEEDER

THE SOLAR ECLIPSE OF AUGUST 29

THE following communication, dated Grenada, September 5, is published by the *Times* from its correspondent with the Eclipse Expedition. It should be compared with the communication made by Prof. MacAlister to Section A at the Birmingham meeting of the British Association (NATURE, September 9, p. 441), and with the article in the same number (p. 437), describing the arrangements for observation.

"The observations of the corona during the last two eclipses, including that observed in Egypt, have been confirmed by the present. Capt. Darwin's observations with the coronagraph seem disappointing, the glare of irradiation from the body of the sun, and not the true corona, being visible on his plates. The bright lines seen in the spectra of the prominences are displaced in such a direction as to prove that there is in them a downrush of gas towards the sun.

"The curious prolongation of the corona observed on several previous occasions to occupy the sun's equatorial plane, does not appear in any of the photographs taken, though it was visible at all the stations except Mr. Lockyer's."

PHOTOGRAPHY OF THE SOLAR CORONA

UNDER the above title we have received the following communication with reference to the results of the recent eclipse observations:—

Accounts have appeared in your journal of my attempts to photograph the corona of the sun without an eclipse. Many of the plates obtained presented appearances which seemed not to myself only, but to several scientific men who must certainly be con-