

### Immunity from Mosquito Bites.

THE note of your correspondent (NATURE, No. 1438), relative to the above subject, leads me to point out that my own experience is the counterpart of that there presented. More than twenty years ago, as a young man, I camped during the months of May and June in the forest which bordered the south shore of Lake Superior, a region teeming with varied forms of insect-life, among which the mosquito held a conspicuous although not the most obnoxious place. I had previously been very sensitive to mosquito stings, and suffered acutely from them during the entire period spent in camp, my hands and face being so closely covered with the peculiar hard lumps resulting from the sting, that they presented in place of soft flesh only a series of contiguous swellings.

The temporary discomfort thus occasioned has since been abundantly recompensed. For many years afterwards mosquitos displayed a marked antipathy towards my blood, rarely stinging me if any other person were available as a subject for their attacks. This kind of immunity I have now partially lost, but even to the present time a mosquito sting occasions me very little annoyance. It is followed by no swelling, and the pain ceases within a few moments after the proboscis is withdrawn.

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### Sound Signals in Fog.

REFERRING to one of your Notes on page 130, I will take the opportunity of repeating a suggestion which I have several times made privately, viz. to have on board ship not a double emitter but a double receiver of sound:—a pair of trumpet-mouths or collectors or ears, one at each side of the ship, with the bulk of the ship as a shadow-throwing object between (like the head), and with tubes leading from them into the captain's or other quiet cabin. The listen-out-man, having these tubes in his ears, would be able to hear distant sounds and estimate their direction with greater precision than if he trusted to his own small collecting organs, but I apprehend in just the same sort of way, and almost without training.

June 12.

OLIVER J. LODGE.

### Fire-fly Light.

IN answer to Prof. Silvanus Thompson's inquiry in NATURE of June 10, it may be stated that the "Johanniskäfer," or "Johanniswürmchen," is the common glow-worm, *Lampyrus noctiluca*, L., or *Lampyrus splendidula*, L. E. OVERTON.  
Zürich, June 12.

## THE APPROACHING TOTAL ECLIPSE OF THE SUN.

### I.

THE failure of so many of the eclipse parties last year to secure observations, makes it a matter of congratulation that the weather prospects of the eclipse to be observed in India on January 22 next year seem to be as favourable as they possibly can be. I propose in the present article to refer generally to the objects to be attained, and to give an account of the proposed arrangements so far as I know them; and to show how fair the prospect of success this time is, I will begin by referring to a note drawn up by Mr. Eliot, F.R.S. Meteorological Reporter to the Government of India, in order to give the chief meteorological features of the tract of country in India through which the line of totality will pass.

The note begins by giving a general idea of the Indian climate.

"It may be premised that the year in India may be divided into two seasons or periods—the north-east or dry monsoon (or season), and the south-west or wet monsoon. During the south-west monsoon winds of oceanic origin prevail, and the whole of the period is one of frequent rain over the greater part of India. The chief features of this period, lasting from June to December, are moderately high temperature, moderate diurnal range of temperature, high humidity, much cloud, and more or

less frequent rain. The amount of cloud and rain differ very considerably in different parts of the country, depending upon their position with respect to the neighbouring seas and the mountain ranges in India, and other conditions. The south-west monsoon winds usually withdraw from Northern India in September or October, and from the Bay of Bengal and Southern India in December. Hence the months of November and December form a transition period from the conditions of the wet to the dry monsoon, the change commencing in Upper India, and extending slowly eastwards and southwards.

"During the dry or north-east monsoon (extending from January to May), winds of land origin prevail in the interior of India. In Northern India these land winds blow down the larger river valleys, and are hence westerly over the Gangetic plain, the largest river plain in India.

"The first two months, January and February, form the cool weather of Northern and Central India and the Deccan. The mean temperature of the day ranges between an average of 71° in the Deccan (Berar, the Central Provinces, and Hyderabad), and 54° in the Punjab. The diurnal range of temperature is large in amount, varying between 25° to 35° or 40° in the interior. The air is usually very dry, skies free from cloud, and winds light, more especially in the Punjab and more remote districts of the interior. The disturbances of this period are feeble cyclonic storms of large extent, which cross Northern India from west to east, and give much cloud and light, to moderate rain in the plains and hills of Northern India. Temperature increases rapidly in March, and that month and the two following months of April and May form the hot weather season. The intensity of the hot weather conditions increases from March to May. The chief features of the weather of this period in the interior of India are high day temperature, large diurnal range of temperature, great dryness of the air, and strong day winds which raise clouds of dust, and more or less obscure the sky and sun. Cyclonic storms of large extent are of comparatively rare occurrence in this period. On the other hand, small local hot weather storms—including hailstorms, thunderstorms, and duststorms—are of frequent occurrence, and tornadoes are of occasional occurrence, in Bengal chiefly."

It follows from this sketch that the eclipse will occur in the middle of the cold weather and at the most favourable time of the year for travelling in India. Light north-east winds, fine weather, and smooth sea are to be expected. Cyclonic storms are of exceedingly rare occurrence in either sea during the month, and the chance of a gale or of stormy weather in the month off the coast of the Konkan (from Bombay to Karwar) is, according to Mr. Eliot, less than 1/50. He states:—

"The weather is throughout the month of January almost uniformly fine, with clear or lightly-clouded skies over the whole of the Peninsula. Light north-easterly to easterly winds obtain in the Deccan, or interior of the Peninsula. The west coast districts are protected by the West Ghats from these winds, and light land and sea breezes prevail. The most remarkable feature of the meteorology of the coast area from Bombay south to Karwar in January is the freedom of the skies from cloud. Disturbances are of very rare occurrence, and fine weather is hence almost a certainty during the whole of the month. There is, however, usually much dust in the air, raised by the dry winds in the Deccan."

Among other most important matter in Mr. Eliot's note is a table showing average temperature, humidity, cloud and rainfall data in January at certain stations in India near the line of totality. We gather that the mean temperature of the month of January in the Konkan coast districts is 76°, with a diurnal range of 20°. In the Deccan (i.e. at Sholapur, &c.) and the Central Provinces the mean temperature of the day in January is approximately 70°, and the diurnal range nearly 30°. In Bihar the mean daily temperature of the month is 62°, and the diurnal range 23°.

Mr. Eliot points out that since the air is very dry over the interior, and the mean daily humidity percentages at stations in the Deccan, Central Provinces, and Berar averages about 40°, any instruments brought out from Europe, such as photographic cameras, &c., should be constructed to withstand the action of this great dryness