to be about 320 metres per second. This is manifestly a misprint for 330 metres, but I should like to state that as far as my experiments have gone the value for free air is not determined, although 330·6, Regnault's value, is probably very nearly what my method would make it. D. J. BLAIKLEY

103, Iverson Road, West Hampstead, N.W., December 10

The Ophidian Genus "Simotes"

MY attention has just been drawn to a note by Mr. H. O. Forbes, published under the heading "The Genus Simotes of Snakes," in NATURE, vol. xxviii. p. 539, in which he states that, when describing a new species of *Simotes* discovered by him in Timor-Laut (*P.Z.S.* 1883) and which I observed was the first of the genus known to occur eastward of Java, I overlooked Krefft's *Simotes australis* from Port Curtis, described in *P.Z.S.* 1864. It is a well known fact, pointed out by Dr. Günther in 1865 (*Zool. Rec.* i.) and since admitted by Krefft himself ("The Snakes of Australia"), that *Simotes australis* is not a species of that innocuous genus, but belongs to a widely different family of *poisonous* snakes and to the genus *Brachyurophis*.

London, December 5 G. A. BOULENGER

THE REMARKABLE SUNSETS

WE have received the following further communications on this subject :—

HAVING been rather too persistently of late requested to explain both the why, and whence, and even the future influences, of the recent very red and brilliant sunsets, I gladly take the opportunity of addressing to NATURE the few remarks I have to make on the actual facts and their proximate causes.

In all truth the sunsets through the last week of November and first four or five days of December have been remarkably fine, and consecutively so numerous. But each one, in so far as I have observed, was but an intensification, and sometimes not much of that, of whatever goes to make up an ordinarily fine sunset, as customary to that season of the year and that direction of wind with its concomitant kind of clouds.

The season of the year not only causes the fiery show to last longer than at many other times but enables it to take place while pedestrians are still engaged in their constitutional afternoon walks in pleasant autumn temperature, and before they shut themselves up for the evening in their comfortable homes with artificial lights around them.

Some thirty years ago I used to spend every evening month after month, at the ordinary dinner hour of others, in the open air, watching for, and when seen making quick coloured drawings of, any exceptionally fine sunset; taking in this way three or four completely separate pictures on the same evening between the time of the sun vulgarly going down beneath the horizon, and at the last the stars coming out in the darkness after the last vestige of twilight or high illuminated cirrus-cloud had disappeared.

In this manner I came to know practically that the so-called after-glow, which has been alarming so many persons within the last few days, whenever the temporary disposition and arrangement of the clouds and vapour in the air allow it to appear, is always more richly coloured in reds of various kinds than any of the earlier glows and more luminous splendours; and that the number of modifications which any one sunset may go through, or the number of different pictures it may make up, according to changes in the clouds both above and below the horizon, is bewildering. But the grandest effects, the nearest approaches to the sublime, were always those when the general light in the air was either so faint, or so monochromatic, that the pigments in the colour box could not be distinguished one from another without the aid of artificial light.

On December 3 and 4 of this week, on setting myself to watch and note with my former apparatus, I found all these bizarre effects of colour and form in their old intensity and their old kaleidoscopic quickness of change. On the 3rd especially the reds were so powerful at certain times, and the air so clear between me and them, that the young crescent moon, though low down in the sky, shone by contrast to the scarlet cloudlets around it with a sort of supernatural lustre of blue silver; while the gaslights under the same contrast, though in reality a gross beery brown in colour, appeared of a delicate sulphur, almost greenish, yellow. Those clouds, therefore, were so red in consequence of something that had happened to the sunlight illumining them which had not happened to that illumining the moon. What was it then? Simply that the lower atmosphere of the earth was so particularly clear of dust, haze, vapour, fogs, and positive obstructions of lower clouds that the sun, though at the time a long way below the horizon, was enabled to send its rays through an unusual length of atmospheric path without experiencing any other diminution than merely the specific elimination of those particular rays in its spectrum-quiver to which the atmosphere, in that particular condition, is antagonistic, leaving the field of glory to others alone.

Had the wind been *south*-west, the stoppage would have been chiefly amongst and of the red rays of light, where the black water-vapour lines are so numerous, chiefly below D, near C, and especially about the region of little "*a*," which then becomes of giant size. But the wind having been really *north*-west, the air was dry, water-vapour lines practically absent, and, as Col. Donnelly most correctly remarked in this week's NATURE (p. 132), the dry air band above D in the citron, and usually called the low sun band in meteorological spectroscopy, was at an immense maximum. Red light was therefore practically unimpeded, green and blue much interfered with, and more and more with every successive instant of further descent of the sun below the horizon. So thus it was that the spectroscope told at any instant through all the varied displays that that coloured light so much admired was simply sunlight that had passed through an extra length of extra-dry air, and was being reflected at the last from thin clouds at an extra height in the atmosphere, where water-vapour is always at a minimum.

But the sunset of December 5 was very different. In the course of the evening there were two or three distinct attempts, as it were, for the clouds to assume red hues, but they lasted for only a few seconds each; and though some aspects of the scene were very fine pictorially, it had to be classed as a "yellow sunset." Next day showed the cause of that in the wind below, as well as above, turning round to east of north. December 6 and 7 had poorer and poorer sunsets of both a yellow and sickly type, and December 8 with a south-west wind has brought in rain.

Thus seems to have ended for the time this fine series of Nature's evening pyrotechnic displays in the west (a similar set having also been witnessed during the mornings in the east); but demands are still made for an explanation of why, and to what end? If we should reply that, given a clear air, not too many clouds, and these high up in the atmosphere and with surfaces well constituted for reflection, the sunsets will always be fine; and that they will be varied exceedingly in their beauty even from moment to moment, according to the exquisite manner in which clouds and cloudlets of cirrus streamers form and dissolve and form again in all varieties of shape and size and density, according to mere temperature changes and other ordinary meteorological conditions of the air; that is not enough to satisfy the present temper of the public, who seem screwed up to a pitch of nervous alarm that what they have been seeing, t ough to them it has been like "music which gives delight and hurts not," may yet have something to do with the green and