

### Scorpion Virus.

I AM much obliged to Sir J. Fayer for pointing out a mistake in my paper on this subject in the Proceedings of the Royal Society of January 6, 1887. In referring to his experiments I remarked, "They show conclusively that the cobra poison will not affect a cobra, and will not even affect the viperine *ptyas*." "*Ptyas*" was written by mistake for "*Daboia*."

I take the opportunity of recording an observation with regard to the slight power scorpions possess of withstanding the heat of the sun's rays. If a scorpion is placed in an open pie-dish in the sun (the experiments were tried in Madras on an averagely hot day), it will run violently round and round, lash its sting about, and then gradually become torpid; this happens in from seven to ten minutes. If then removed into the shade, it will gradually recover; but if left for longer in the sun, it dies. As the scorpion is an inhabitant of hot countries, this sensitiveness to the sun's rays is very remarkable.

A. G. BOURNE.

Madras, April 13.

### Weight and Mass.

I FIND it convenient to distinguish in writing between mass and weight by using the symbols *gr.* or *kgr.* or *lb.* to denote masses, and reserving capital letters *Gr.*, *Kgr.*, &c., where weights, or forces in gravitation measure, are understood; say, 50 *kgr.* of stone, or wood, or iron—1000 *Kgr.* denoting a stress in some structure or the like. Some agreement in these notations would be desirable.

W.

Lemberg, May 14.

### Dynamical Units.

IN reference to this subject may I remark that the proposed term "*cel*" is etymologically incorrect for the meaning intended to be conveyed? It might stand as a contraction for "*celerity*," *i.e.* velocity, but not for the rate of *increase* of velocity. The essential distinction between velocity and acceleration is wholly expressed in the prefix "*ac*." If we must cut all our words down to one syllable, the "*ac*" would really have in it more correct meaning than the "*cel*."

Early in 1886, Prof. D. H. Marshall, of King's University, Kingston, published a book on dynamics, in which he uses the word "*tach*" to mean unit velocity of one centimetre per second. He has no special name for the unit of acceleration, but the unit of momentum he calls a "*gramtach*," and the unit rate of doing work a "*dyntach*." The unit pressure-intensity of one degree per square centimetre he calls a "*prem*."

I would like to suggest that names for the units might be formed systematically by the addition to the ordinary name for the quantity of the invariable affix "*on*," which is the root part of the word "*one*." Thus as unit names we would employ "*velociton*" or "*velon*"; "*acceleron*" or "*accelon*"; "*momenton*"; "*presson*"; "*tenson*," &c., &c. For the sake of uniformity we might change "*radian*" into "*radion*."

Birmingham, May 4.

ROBERT H. SMITH.

### Monkeys opening Oysters.

So many people have expressed their surprise at hearing that I constantly saw monkeys breaking open oysters with a stone on the islands off South Burmah, that it may be of interest to give a short description of their method of using such a tool.

The low-water rocks of the islands of the Mergui Archipelago are covered with oysters, large and small. A monkey, probably *Macacus cynomolgus*, which infests these islands, prowls about the shore when the tide is low, opening the rock-oysters with a stone by striking the base of the upper valve until it dislocates and breaks up. He then extracts the oyster with his finger and thumb, occasionally putting his mouth straight to the broken shell.

On disturbing them, I generally found that they had selected a stone more apparently for convenience in handling than for its value as a hammer, and it was smaller in proportion to what a human being would have selected for a proportionate amount of work. In short, it was usually a stone they could get their fingers round. As the rocks crop up through the low-water mud, the stone had to be brought from high-water mark, this distance varying from 10 to 80 yards. This monkey has chosen the easiest way to open the rock-oyster, viz. to dislocate the valves by a blow on the base of the upper one, and to break the

shell over the attaching muscle. The gibbon also frequents these islands, but I never saw one of them on the beach.

ALFRED CARPENTER.

Marine Survey Office, Bombay, April 14.

### Zirconia.

OUR attention has been drawn to a letter in NATURE, vol. xxxv. p. 583, written by Mr. Lewis Wright. He makes the statement that we supplied him with a sample of zirconia as "*pure*," which, upon examination, he found to contain silica, as well as some soda, rendering the sample quite useless for the purpose for which it was required.

We trust you will allow us to correct this statement. We sold the zirconia as "*impure*," and when Mr. Wright asked us to purify it further for him, declined to do so. We told him that it was an article obtained as a residue produced during the preparation of another body, and was sold, in consequence, at a price far lower than the usual price at which the article can be produced in a pure state.

HOPKIN AND WILLIAMS.

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### Sunspots.

DR. VEEDER is perfectly correct in his letter appearing in NATURE, vol. xxxv. p. 584, in his description of the tiny group of spotlets which were seen on November 15, 16, and 17. The complete record of spots for the month of November 1886 appears to have been as follows, the areas of the spots being expressed, as in the Greenwich results, in millionths of the sun's visible hemisphere.

| Date.       |     | Number of spots. | Total area. |
|-------------|-----|------------------|-------------|
| November 12 | ... | 1                | 7           |
| " 13        | ... | 1                | 9           |
| " 14        | ... | 2                | 8           |
| " 15        | ... | 1                | 1           |
| " 16        | ... | 2                | 5           |
| " 17        | ... | 2                | 12          |
| " 26        | ... | 1                | 6           |

The mean daily area of these seven days, the only days in the month showing spots, was only 7 millionths, and for the month as a whole, 1.6 millionths. The exceptional character of the month will be better seen when it is remembered that the Greenwich results give 24 millionths as the mean daily area for 1878, the year of minimum; whilst at maximum, as in 1883, the mean daily area was 1155.

With reference to the "*six days*" which Dr. Veeder quotes from the note on "*Solar Activity in 1886*," appearing in the Astronomical Column of NATURE, vol. xxxv. p. 445, the assertion was based on a record which was defective for three or four days. The group he describes as making its first appearance on December 8 was not seen here until December 10, and had only become important by December 12. Since the appearance of Dr. Veeder's letter, I have been privileged to inspect the series of photographs taken in India and in the Mauritius, under the auspices of the Solar Physics Committee. These show that the group had not come into view at the east limb until after the photographs on December 8 had been taken, so that, for Europe and Asia, December 9, which was cloudy here, was practically the first day of the spot.

THE WRITER OF THE NOTE.

### "The Game of Logic."

IN the course of a review of Lewis Carroll's "*Game of Logic*" (p. 3), Mr. A. Sidgwick says incidentally that "*In Mr. Venn's scheme propositions either tell us that a compartment is empty or tell us nothing about it*." This is not quite correct; he should have confined his statement to *universal* propositions. It is quite true that on the schemes of Boole and Jevons nothing is recognized but 0 and 1; nothing but the excision of a combination and the letting it stand; and they both make the attempt to express particular propositions with such resources. But I have taken particular pains to show that such a scheme of dichotomy will not suffice to represent affirmatives and negatives, universals and particulars; and that for this purpose, when we are dealing with logic on the compartmental