very great advantages in its favour; and, for all laboratories supplied with aqueduct-pressure, I venture to think that it affords the best solution of the problem of inexpensive, convenient, and effective power. DAVID P. TODD

Lawrence Observatory, Amherst, Mass., May 15

Scientific Nomenclature

IN a letter published in NATURE for May 27 (p. 76) Prof. Minchin proposes to replace the expression "potential energy" by "static energy." It seems to have escaped his notice that a similar expression, proposed many years ago by Sir William Thomson, was used until it was replaced by the very words which Prof. Minchin wishes now to abolish. A short account of the question is given by Maxwell in "Matter and Motion," p. 81, and I should like to bring the following passage to the notice of those who take an interest in this question :—

"This is called the 'sum of the tensions' by Helmholtz in his celebrated memoir on the 'Conservation of Energy.' Thomson called it statical energy; it has also been called energy of position; but Rankine introduced the term potential energy—a very felicitous expression, since it not only signifies the energy which the system has not in actual possession but only has the power to acquire, but it also indicates its connection with what has been called (on other grounds) the potential function."

Harrow, June 8 G. GRIFFITH

Neæra

I WISH to request any of your readers who may dredge, or have opportunity this summer, to observe living or fresh specimens of the genus *Neæra*, Gray, and see whether branchiæ exist in that group. A Lamellibranch without branchiæ is anomalous, to say the least. I find in a new species of *Neæra* (sub-genus *Myonera*) from the Gulf of Mexico the following anatomical facts :—The mantle closed except for the small siphon and a narrow short slit for the thorn-shaped foot; no gills, no palps; the oral opening circular, plain; the roof of the peripedal cavity between the base of the body and the mantle margin is flattish, fleshy, with sparse pustules; a peripheral very stout pink muscle runs on each side around this, and is prolonged upward to the shell before the true adductor at each end of each valve, thus accounting for the double scars to be found there; the foot is close to the oral orifice, not grooved for the byssus, but pedunculated and surrounded by a groove; around the siphonal opening are numerous tentacular processes and a moderate number of ocelli. The specimens appear to be adult and perfectly preserved. An examination of specimens of *Neæra arctica* and *Neæra obesa*, Lovèn, indicated a similar state of affairs, though these specimens were not in as good condition as the one from the Gulf of Mexico. I do not find in the literature any categorical statement of the observation of gills in this genus. Clark is non-committal (in his "British Testacea"), Jeffreys speaks of seeing the "pink gills" through the shell, but that which he saw *pink* was without doubt the circular muscle I have mentioned.

The question is worthy of a definite solution. My specimens seem to leave no doubt that there are no gills, but it is always best to be suspicious of material long in alcohol.

WM. H. DALL

Smithsonian Institution, Washington, D.C., May 27

"Plants and their Defences"

WITH regard to the interesting article in your issue for May 6 (p. 5) on "Plants and their Defences," I should like to offer two remarks, and in return would be very glad to receive from you information upon a certain point. (1) The author enumerates different species of plants protected by the severe stings of ants, but does not seem to know the remarkable work of Beccari, "Piante ospitatrici ossia piante formicarie della Malesia e della Papuasia" (Malesia, vol. ii., Firenze, 1885). Beccari describes seventeen partly new species of "Myrmecophilous" Rubiaceæ, among which are eleven of Hydnophytum (not Hydriophytum, as is erroneously given in the article in NATURE). You will find a further contribution to this question in Henry O. Forbes's "Wanderungen durch den Malayischen Archipel," vol. i. pp. 84–88 of the German translation.

For my part, I should be greatly obliged if you would communicate to me the title of the original work from which the author of "Plants and their Defences" has taken his account of *Triplaris Schomburgkiana*, *Schomburgkia tibicinis*, and *Acacia sphærocephala*.

(2) Concerning the same article, Mr. Alfred W. Bennett (NATURE of May 20, p. 52) is inclined to think that the poisonous fluid of the nettle-glands is not formic acid, as generally conjectured, because the fluid frequently has an alkaline reaction. As a matter of fact, Prof. Dr. Haberlandt, at Graz (Austria), has recently, in vol. xciii. of *Sitzungsberichte des kaiserl. Akademie der Wissenschaften in Wien*, 1886, Februar-Heft, shown in his article, "Zur Anatomie und Physiologie der pflanzlichen Brennhaare," that (1) the poison of the stinging glands is not identical with formic acid; (2) nor is it the albumen dissolved in the fluid of the glands; but (3) that most probably this fluid is a transformed ferment or enzymotic poison.

Frankfurt a. Oder, June 2 E. HUTH

A Remarkable Hailstorm

ON April 17, at 4 o'clock p.m. (local time), a very remarkable hailstorm visited the neighbourhood of a small hamlet, called *El Totumo*,[1] not far from the town of Tinaco, section Cojedes, State of Zamora, Venezuela. The place is approximately in 9° 25′ N. lat., and 68° 5′ long. W. of Greenwich, certainly not more than 200 metres above sea-level. My informant is a resident of El Totumo, named Nicolas Moreno Nuñez, who is universally said to be a trustworthy and respectable man. There was first a very heavy thunderstorm with much rain; but after some time hailstones began to fall in such abundance that it might have been easy to collect them by hundreds of bushels, some weighing as much as two ounces. It is well known that between the tropics hailstorms are exceedingly rare in localities situated in the lowlands; but the present case is still more interesting, on account of the colour of the hailstones, some of which were *whitish, whilst others were blue or rose-coloured*. I have read of but one instance in which the two last-mentioned colours were observed, viz. in the hailstorm of Minsk of June 14, 1880, described by Lagunowitch, and quoted by Th. Schwedoff in his memoir "On the Origin of Hailstorms."[2] Schwedoff thinks that the blue and rosy colours are owing to the presence of salts of cobalt and nickel, and thus confirm his hypothesis of the cosmic origin of hail. I do not know whether the existence of those mineral constituents in the hailstones of Minsk was ever made certain by chemical analysis, and it is of course impossible for me to do so in the present case, when almost a month has passed since the phenomenon took place. But it is undoubtedly a very curious coincidence that the *same* colours should have been observed in both instances and in localities so widely separated from each other; whilst there is not the slightest possibility that my informant, an honest and plain countryman of no literary education whatever, should have had any knowledge of such an observation having been made before.

Caracas University, May 12 A. ERNST

VISITATION OF THE ROYAL OBSERVATORY

THE visitation to the Royal Observatory by the Board of Visitors took place last Saturday, when there was a very numerous attendance. The report of the Astronomer-Royal to the Board gives, as usual, an account of the work done during the past year, and references to any points of interest or importance which have been raised. From the report we select the following particulars :—

Mr. Turner has recently investigated the discordance between observations for coincidence of the collimators made respectively through the apertures in the cube of the transit-circle and with the instrument raised. A wooden model of the cube was constructed through which the observation could be made when the transit-circle was raised, and it was thus shown that the discordance was due to the cutting off of portions of the object-glasses by the cube, and not to any effect of temperature. In view of this result it seems desirable that the optical

[1] This is the vernacular name of the calabash-tree (*Crescentia Cujete*); there is, or was, probably a remarkable specimen of this tree in the neighbourhood of the hamlet.

[2] I only know a Spanish translation of Schwedoff's memoir, in *Crónica científica* (Barcelona), 1882, No. 120, pp. 553-60.