

I think that we are now justified in assuming that the helium, a product of radio-active change, is present in the minerals in a state of supersaturated solid solution; that the mineral substance being impermeable to the gas at ordinary temperatures, the velocity with which equilibrium is established between the helium in solution and the helium in the gaseous phase is infinitely small, but increases very rapidly with rise of temperature; that as the solubility of helium in the mineral substance is probably very small, the mineral cannot be made to re-absorb the gas. Grinding even to an impalpable powder, if unaccompanied by local heating, should result in the evolution of minute quantities of helium only.

I may point out in conclusion that the "deflagration" which takes place when "fergusonite," is heated, and was taken by Sir Wm. Ramsay and myself to indicate the presence of a chemical compound of helium, also takes place in the case of some minerals which contain no helium.

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The Pollination of Exotic Flowers.

IN connection with Prof. Groom's article on the pollination of exotic flowers (November 10, 1904, p. 26) the following notes may be of interest. The inflorescence of *Marcgravia Umbellata* is described in Schimper's "Plant Geography," where Belt's description is quoted from the "Naturalist in Nicaragua." The plant is common here, climbing to the summit of the forest trees, and is frequently visited by humming birds. The bird settles on the top of the flowers and inserts its long curved beak into the pitchers below to suck the sweet juice which they contain. I have not seen insects visiting the flowers, neither have I found them in the pitchers, and conclude that the birds are attracted by the sweet juice itself rather than by insects in search of it as Belt suggests.

Flowers with strong scent and brush-like stamens are very common, and one of them, the Pois Doux (*Inga laurina*), is surrounded when in blossom by a motley crowd of bees, large beetles, and insects of every description, as well as by humming birds of several species. The latter certainly visit very different plants, but are most familiar hovering round the banana flowers, sucking the drops of sweet liquid continually oozing from them.

Flowers like the Pois Doux are easily destroyed by heavy rain, and blossom only for a short period. A large number of others are provided with horned stamens, with barren anthers or anther lobes. May not this be a protection against loss of pollen by rain and wind, it being kept in a sheltered situation, and only set free when an alighting insect moves the stamens? It would be interesting to observe how far the abundance of flowers with horned stamens is correlated with heavy rainfall and constant wind.

Dominica, December 13, 1904. ELLA M. BRYANT.

Reversal of Charge in Induction Machines.

I HAVE tried Mr. G. W. Walker's experiment with a small Wimshurst, with 8" plates, and find that the reversal he mentions generally takes place, but not always. In my case, however, the machine is made so as to excite either way, and the reversal will not take place unless excitation has occurred while the motion is reversed.

R. LANGTON COLE.

Sutton, Surrey, January 6.

EVIL SPIRITS AS A CAUSE OF SICKNESS IN BABYLONIA.¹

IN a former number of NATURE (vol. lxi., p. 26) the attention of our readers was directed to the appearance of the first volume of a work which Mr. Campbell Thompson, of the British Museum, was devoting to the consideration of the important function which devils and evil spirits were believed to play in the production of disease by the early inhabitants of Babylonia.

¹ "The Devils and Evil Spirits of Babylonia." By R. Campbell Thompson. Vol. ii. Pp. liv+179. (London: Luzac and Co., 1904.) Price 12s. 6d. net.

It was impossible at that time to state the final conclusions at which Mr. Thompson had arrived, for the publication of his work was not completed; but now that we have the second volume in our hands our readers are in a position to judge for themselves of the character and importance of the results, which have now been clothed in the dress of a modern language for the first time. The sources of such results, we need hardly say, are the terra-cotta tablets of the royal library at Nineveh, now preserved in the British Museum, and after a careful examination of Mr. Thompson's volumes we are able to say that the translator has done his best to reproduce the meaning of the documents which he places before us without unnecessary comments or theories.

It must be said at the outset that we do not regard Mr. Thompson's work as final in all particulars, for in respect of many Assyrian texts this work is the *editio princeps*; but none can fail to be pleased with the manifest honesty of the translations, which quite justifies us in overlooking the baldness and crudity of expression which sometimes characterise them. In studies of this kind we want the texts and the best rendering of them possible, but the most important point of all is that the editor should not read meanings into the words of his texts or twist them to suit preconceived notions. It goes without saying that Mr. Thompson's translations will not be accepted by other labourers in his field without reservation. Indeed, we may note in passing that M. Fossey has already animadverted upon them in the *Recueil de Travaux*, in the *Revue Critique*, and in the part of the *Journal Asiatique* just issued. It is no part of our duty here to attempt to vindicate Mr. Thompson's renderings or to belittle M. Fossey's knowledge of the science of ancient magic, but it must in common fairness be stated that the latter *savant* is not skilled in dealing with cuneiform documents except through the medium of the copies of other scholars who have been trained in making transcripts direct from the original tablets, and the mere fact that he condemns Mr. Thompson's derivations from the Syriac proves that he does not comprehend the importance of one northern Semitic dialect in helping to explain another. On the other hand, Mr. Thompson has spent some years in the task of copying the various classes of tablets which he is now editing and translating, and though some may admire M. Fossey's tempting renderings, and prefer them to those of Mr. Thompson, it should be remembered that the translations set forth in the volume before us are those of the skilled workman who is working at his trade, whilst those of M. Fossey are the product of a student of magic and religion in general.

The groups of tablets published by Mr. Thompson are five in number. The first are inscribed with exorcisms and spells which are directed against the disease of ague or fever; the second contain charms and incantations which were intended to do away with headache; the third deal with a series of diseases of an internal character, but it cannot at present be said exactly what those diseases were; the fourth are inscribed with texts written with the view of destroying the "taboo" to which, it seems, man was thought to be peculiarly liable; and the fifth supply descriptions of supernatural beings, among whom may be mentioned a creature who was half woman and half snake. Mr. Thompson identifies her with the goddess Nin-tu, who was the Babylonian equivalent of the Egyptian goddesses Hathor, Isis, Mer-sekert, &c., and the Virgin Mary among Oriental Christian peoples. Like each of those goddesses she was a form of the World-mother, or chief Mother-goddess who plays such an important part in many mythologies. By way of supplement, Mr. Thompson has added the