

**The Eugenics Education Society.**

IN NATURE of January 29 there is a letter from Prof. Karl Pearson pointing out that he has been misquoted in *The Eugenics Review*, the word "years" having been substituted for the words "few months."

An apology to Prof. Pearson for this purely accidental blunder will appear in the next issue of the review. I should be glad if you would give me space to say through your columns also that we much regret that this mistake was made.

LEONARD DARWIN.  
(President.)

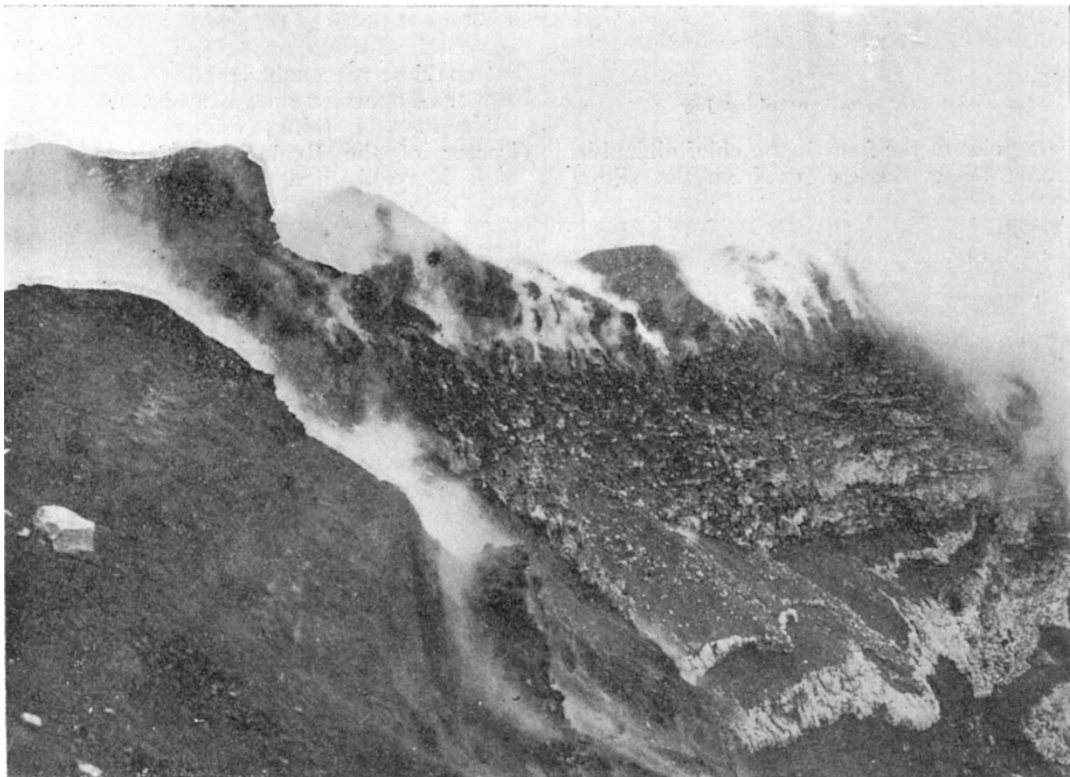
The Eugenics Education Society, Kingsway House,  
Kingsway, W.C., January 31.

**OBSERVATIONS AT THE BOTTOM OF THE CRATER OF VESUVIUS.**

SINCE the appearance of the interesting memoirs of M. A. Brun, of Geneva, and the publication of his important monograph, no

are quite subordinate to the water-gas—is an erroneous one; he, on the other hand, maintains that his observations prove (alike in the blasts of vapour from volcanic vents, in the distension of molten lava into pumice, and its dispersion as dust) that water plays but an insignificant part as compared with other gases.

The discovery by Prof. Malladra of a practicable route by which the very lowest point in the present Vesuvian crater can be reached, and its utilisation by Mr. Frederick Burlingham for kinematographic work, promise to furnish a means by which the rival views concerning the nature of the volcanic gases may be put to a crucial test. The floor of the present crater of Vesuvius lies at a depth of about 1000 ft. below the crater-rim; in this floor a funnel-shaped opening 200 ft. deep was opened last July, after the volcano had sunk to the solfataric condition following the



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FIG. 1.—Fumaroles on south-east crater wall, showing steepness of crater-wall inside.

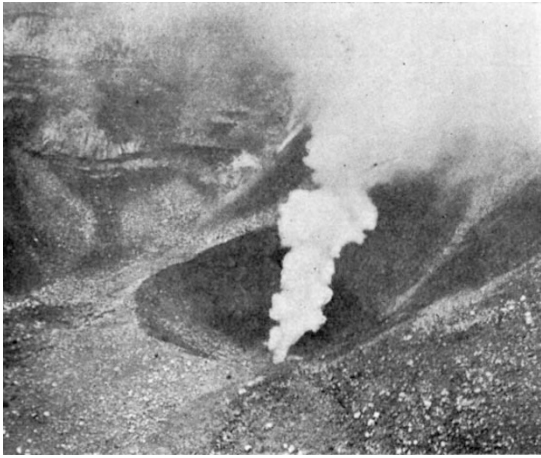
[F. Burlingham.

problem has appealed to vulcanologists with greater force than that concerned with the nature and origin of the gases which produce explosive action in volcanoes. That water-gas appears in enormous quantities during explosive eruptions cannot be doubted, for it is condensed in heavy rain-torrents; but it is by no means certain that these abundant watery vapours may not be due, wholly or in large part, to moisture derived originally from the atmosphere. M. Brun regards the long prevalent opinion among geologists—that the hydrochloric acid, sulphurous acid, nitrogen, and other gases, which are undoubtedly present,

great and destructive eruption of 1906; at the bottom of this funnel (1212 ft. from the summit of the volcano) considerable, and apparently increasing, activity is taking place. It remains to be seen whether this activity will eventuate in the formation of a cone rising from the present crater-floor, or in a violent paroxysm that will carry away the crater-floor and increase the depth of the cavity.

By the courtesy of the British and Colonial Kinematograph Company and of Mr. Burlingham, NATURE is able to publish examples of the interesting photographs obtained during their

enterprising undertaking. With two Neapolitans familiar with the mountain, Mr. Burlingham, who is an experienced alpine climber, reached



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FIG. 2.—Showing "funnel" formed last July.

the lowest point of the funnel, the chief difficulties encountered being the danger from the sliding

well worthy of being seen by all interested in science.

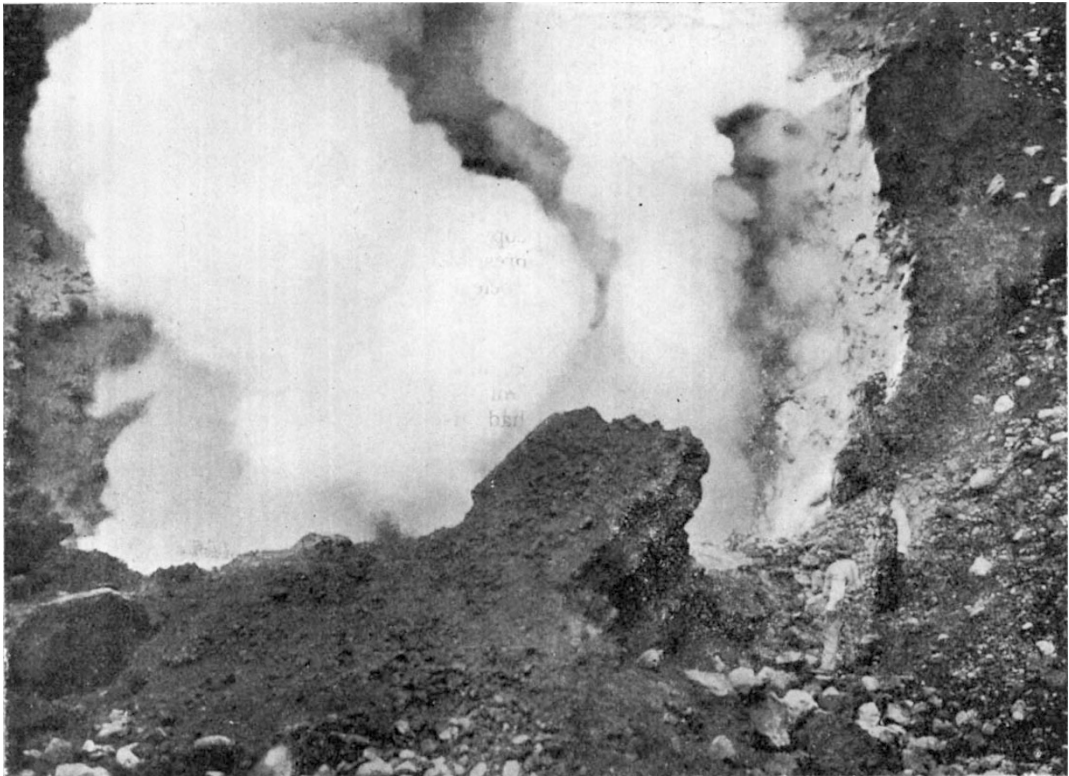
Fig. 1 is a view taken on the steep side of the crater, and shows near the top numerous fumaroles, arising probably from rain and snow-water penetrating to the heated materials. The stratified arrangement of the scoriæ and lava ejections is well shown in the photograph.

Fig. 2, taken lower down, shows the floor of the crater with the mouth of the funnel, and the vapour column rising out of it as seen from some distance above.

Fig. 3 is the view taken at the bottom of the funnel, with the masses of "incandescent pink vapours, in places exhibiting blue and other tints," rushing up from the bottom vent.

As Mr. Burlingham was able to convey apparatus exceeding 70 lb. in weight to the point shown in Fig. 3, it would seem possible to transport tubes and collecting vessels to the spot so as to obtain samples of the gases for analyses; gases thus obtained would not be subject to the objection that could be reasonably made to collections made from the fumaroles shown in Fig. 1.

We may, I think, rely on the enlightened director of the Reale Osservatorio Vesuviano, Prof. Mercalli, and his enterprising assistants



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FIG. 3.—Where fresh lava was found, 1212 feet down at bottom of funnel, where pink incandescent fumes belch from the mouth which Prof. Mercalli discovered.

down of great loose masses and the powerful fumes of hydrochloric acid. The complete films, which are now being exhibited in London, are not to lose sight of this opportunity for an important research.

JOHN W. JUDD.