LETTERS TO THE EDITOR.

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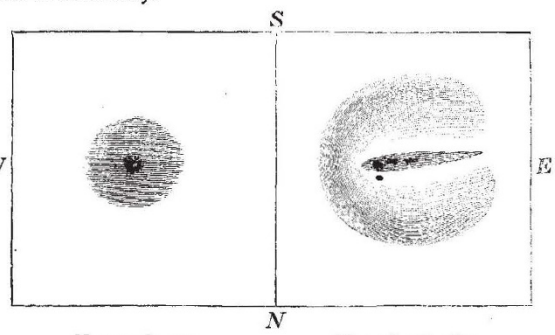
The New Comet.

THE comet discovered by Mr. Holmes on November 6 was observed here on November 9 at 5h. 50m., and found to consist of a very bright circular nebu osity with central condensation. The diameter of the comet was 5′ 41″.

It was re-observed on November 16 at 10h. 45m., and its physical appearance seemed to have undergone a complete transformation. The diameter had increased to 10′ 33″, and the cometary material had become much fainter and more irregular. The nucleus was now in the form of a bright streak, and this was enveloped in a large faint coma. A small star was seen just N. of the W. extremity of the nucleus, and the latter seemed composed of knots of nebulosity.



Nov. 9, 5h. 50m. Nov. 16, 10h. 45m.

On November 19, 14h. 15m., the comet was seen again. Its general aspect was much fainter, and it exhibited a further increase in dimensions. I carefully determined its diameter as 14′ 30″, but the outlying portions were very tenuous and indefinite.

From Berberich's elements given in Edinburgh circular No. 33, it appears that the comet is moving rapidly away from the earth. The great increase in its apparent diameter is therefore not a little remarkable. On November 9 the comet was about 203 millions of miles distant from the earth, and its real diameter must have been 333,000 miles. On the 16th this had increased to 652,000 miles. By the 19th the comet's distance had become 217 millions of miles, and its real diameter 925,000. In ten days, therefore, the cometary material expanded nearly threefold.

Bristol, November 20. W. F. DENNING.

The Light of Planets.

A FEW facts relative to this subject may be interesting. At Plymouth on August 12, about 9 o'clock, favoured with a beautifully clear horizon, the brilliancy of Mars was so great that it cast a distinctly bl ck shadow on a piece of white paper from an ordinary walking stick held at a distance of 4½ inches; the outline of the hand, under the same conditions, was also easily perceptible. A faint, yet decided, darkening of the white cliffs of the shore was caused by a person standing upright—the slope being about 45°. The point of observation was at the extreme north-west of the Sound, and the splendour of the planet's light reflected from three or four miles of water is perhaps unrivalled.

The light of Jupiter has often enabled me, when using the telescope at a southern window, to make drawings and such references to books, &c., as were found necessary, without any other illumination. JOHN GARSTANG.

Springwell House, Blackburn, November 21.

Rutherfurd Measures of Stars about β Cygni.

IN order to prevent any possible misapprehension in connection with your notice (NATURE, vol. xlvi. p. 619) of Mr. Rutherfurd's measures of the stars surrounding β Cygni, may I call attention to the following?—The two stars of Argelander, 27.3435 and 28.334, concerning which a doubt is expressed in my paper, are certainly lacking on the Rutherfurd plates. If they were present they would be very near the edges of the plates, and it is for this reason that I doubted whether we should expect to find them at all. The star numbered 28 in the Rutherfurd list, which appeared only as a sort of elongation of No. 27 on a plate taken at this Observatory, April 19, 1892, is one of the components of Σ2539, as was pointed out by Mr. Burnham in the *Astronomical Journal*, No. 268, and by myself in the same journal, No. 266. HAROLD JACOBY.

Columbia College Observatory, New York, November 11.

The Alleged "Aggressive Mimicry" of *Volucellæ*.

MR. POULTON'S letter calls for few words in reply. I invited Mr. Poulton to produce observations in support of his statement that the two varieties of *Volucella bombylans* lay in the nests of the bees which they respectively resemble. To this invitation Mr. Poulton has not responded. He tells us that his account represented "a very general impression"; that the same impression has been set forth in a showcase at the Museum of the Royal College of Surgeons; that even if he were mistaken it was well, if through his mistake the truth shall the more abound. It is thus admitted that in making that statement Mr. Poulton relied not on original authorities, but on the general impressions of others. That these impressions are in any sense correct there is as yet no evidence to show.

Compared with this, Mr. Poulton's error as to *Bombus muscorum* is of course comparatively trifling and it would be useless to pursue the matter, were it not for discoveries made in the process of unravelling it.

I pointed out that *V. bombylans* is common in nests of *B. muscorum*, a bee which it does not resemble. Mr. Poulton in reply maintains the opinion that *V. bombylans* var. *mystacea* does resemble *B. muscorum*. In defence of this statement he refers to (1) the showcase at the Royal College of Surgeons, where the resemblance is set forth; (2) a recent book, "Animal Intelligence," by Mr. Lloyd Morgan, where the resemblance is again asserted and illustrated by figures of insects in the similar showcase at the Natural History Museum.

In following up these clues I came to unexpected results. (1) There is at the College of Surgeons a showcase, as stated, illustrating the likeness of *Volucellæ* to humble-bees. The label states that "the resemblance enables them [the flies] to escape detection." Two bees are exhibited bearing a good likeness to the var. *mystacea*, and, as Mr. Poulton says, they are labelled "*B. muscorum*." The one, however, is a worker of *B. sylvarum L.*, and the other is probably a male of the same species. Neither can be mistaken for *B. muscorum*, which they do not resemble.

(2) At the Natural History Museum bees of several species are shown beside the *Volucellæ*, with a similar statement that the resemblance enables the flies "to enter the nest of the bee without molestation." Not one of these bees is *B. muscorum*, nor are any of them said to belong to this species, for no names are given. Nevertheless, on turning to Mr. Lloyd Morgan's book, which I had not before seen, I find the statement (p. 90) that *V. bombylans* "closely resembles" *B. muscorum*, the passage continuing in the words of the Natural History Museum label. Figures are added showing the two forms of *V. bombylans* and two very different bees, *both* marked "*B. muscorum*." Now the figures are from *photographs* of certain specimens in the showcase, and on reference to the specimens in question, it appears that one of them is a yellow-banded humble-bee (perhaps *B. hortorum*), while the other is one of the red-tailed humble-bees! These two are put out to match *V. bombylans* and the var. *mystacea* respectively, and of course have no likeness either to each other, or to *B. muscorum*, though both are referred to this species by Mr. Lloyd Morgan.

Mr. Poulton's choice of *B. muscorum* as a form resembled by the var. *mystacea* probably therefore arose from the wrong naming at the Royal College of Surgeons. How Mr. Lloyd Morgan came to call the two different bees by the name *B. muscorum*, which belongs to neither, I cannot tell. Perhaps this is in part an echo of Mr. Poulton's previous mistake.

Any one by reference to a collection of bees may easily satisfy himself that the common and ordinary *B. muscorum*, with its bright brown thorax, does not resemble *V. bombylans*, though this fly is common in its nests, just as *V. pellucens* lives in wasps' nests, though it does not resemble a wasp.

In the absence of direct evidence in its favour, and inasmuch