

SCIENCE :

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JOHN MICHELS, Editor.

TERMS:

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ENCKE'S COMET.

This comet is now visible in telescopes of moderate power, and will increase in brightness until November, when it may be visible to the naked eye. The corrections to the ephemeris, computed by Dr. Backlund, of the Pulkowa Observatory, are as follows :

$$\Delta\alpha = -39''.0 \quad \Delta\delta = -1''.4$$

These corrections may vary a little as the comet approaches the earth, but it can be found without trouble. If we consider the great care and labor that have been given to the calculation of the ephemeris; and the fact that the perturbations by nearly all the principal planets have been computed, as well as the effect of the resisting medium in space, the corrections to the ephemeris seem to be very large. This comet affords another example of what is now most needed in Astronomy, viz., complete and careful theoretical investigations. It will be comparatively easy to obtain a great number of observations of this comet during its present return, while a much smaller number of good observations is sufficient. The attention of astronomers should be given rather to a satisfactory determination of the motion of the comet, since the recent computers of its orbit do not have the success of Encke in predicting its returns.

THE WARNER-ASTRONOMICAL PRIZES.

We recently explained, in an editorial, the conditions on which Mr. H. H. Warner consents to present to each of the discoverers of comets during the year 1881, the sum of two hundred dollars. We also stated that applicants for the prize for Comet *b*, 1881, were presenting their claims at the rate of sixty *per diem*.

We now learn by a communication from Mr. C. S. Whittemore, secretary to the Rochester Astronomical

Society, that nearly 3000 letters were received claiming priority in the discovery of this comet, all of which have been examined. As a result of such examination, Professor Lewis Swift reports that "no conclusion can be reached that would be scientific and satisfactory." In other words, the claims of the 3000 applicants are ignored, and the prize of \$200 for this, the most important of the three comets, so far discovered in 1881, is withdrawn.

We cannot refrain from expressing our dissatisfaction with this decision, and the methods employed in arriving at it, which we believe to be neither "scientific nor satisfactory."

Mr. Warner, in a letter to the public dated September 5th, states, that two of the conditions on which he consented to give a prize of \$200 to the discoverer of every comet appearing in 1881, were as follows: That it should be "telescopic" and "unexpected." He now claims that "Comet *b* was neither telescopic nor unexpected." Under these circumstances if Mr. Warner had simply announced that Comet *b* did not come within the meaning of his advertised prize, his course would have been intelligible and satisfactory. But he himself has stated, that in spite of these disqualifying circumstances, he "was anxious, could the first discoverer be found, to make a special reward of \$200." In other words, a decision was arrived at to waive the disqualifications, and to proceed as if they did not exist, and the same letter admits that Professor Lewis Swift "examined" the 3000 applications on their merits. Such being the case, when Professor Swift found that he was unable to arrive at a "scientific and satisfactory conclusion," he should (under the terms of the contract between Mr. Warner and the public), have instantly referred the matter to Professor Asaph Hall, of Washington, and the other gentleman named as referee.

Under these circumstances we consider that Mr. Warner is under the moral obligation of carrying out his contract in regard to this matter, and insisting on Professor Swift taking the proper steps to arrive at some decision. Probably the mere perusal of the 3000 letters would instantly reduce the number to some half dozen applicants, whose cases could be submitted to Professor Hall, who would probably decide upon their merits within a week.

The second point in Mr. Warner's letter to which we would draw attention, is that in which he states, that to mitigate his disappointment in not being able to trace the "first discoverer" of Comet *b*, he proposes as a balm to the claimants, and to encourage astronomical study, to offer a prize of \$200 to the person who shall prepare the best essay on "COMETS: *Their Composition, Purpose and Effect upon the Earth.*"

The conditions are as follows :

"1st. The essay must be written in plain language, each term to be defined in brackets immediately following, and must not exceed 3000 words.

"2nd. Each essay must be signed with a *nom de plume*, and a sealed envelope must accompany the essay superscribed with the *nom de plume*, and containing the real name of the author.

"3rd. All the essays must be filed with Dr. Lewis Swift, Director of the Warner Observatory, Rochester, N. Y., by November 1, 1881, and he will submit them to the judges.

"I hope that this prize will produce valuable additions to popular astronomical literature."

We regret that Mr. Warner was not better advised when he arranged the title of the essay and named the conditions. By "*plain*" language we presume he calls for "simple" language, but we are unable to explain his desire that "each technical term shall be defined in brackets immediately following." For whose benefit is all this defining to be offered? Is it to aid Professor Swift and the judges? If to aid readers, when the essay is subsequently published, would not a simple glossary of the scientific terms used, added at the end, be more appropriate? If "*each* technical term is to be defined," we fear that a large percentage of the 3000 words permitted will be used for this purpose.

Again, would it not be a more creditable arrangement, that the essays be filed with some independent person, instead of Professor Swift, who is at least a beneficiary of Mr. Warner, and is both a competitor and the judge in these prize gifts? (We think Professor Swift awarded the first Warner prize for comets to himself.)

Lastly, we find that no names are given of those who are to be judges of the value of the prize essays. This omission is very important, and seems to raise a doubt whether any judges whose opinion is worthy of respect can be secured to connect themselves with a scheme proposed under such conditions. Again, what disposition is to be made of the essays received by Mr. Warner? nothing is guaranteed in this respect; and will Professor Swift once more announce to the essayists that "no conclusion can be reached which is scientific and satisfactory?"

We do not wish our remarks to be interpreted in a sense which implies that either Mr. Warner or Professor Swift are desirous of acting improperly in this matter, although their behaviour may, in some quarters, be severely criticised; we rather lean to the view that their judgment and discretion is at fault, and that they require the counsel of some friend who can so advise them, that they arrive at "conclusions which

are scientific and satisfactory." Mr. Warner hopes that his prize "will produce valuable additions to popular astronomical literature;" we fear that under the conditions he offers, he will be inundated with vulgar scientific trash.

In conclusion, we offer Mr. Warner one word of advice. If he honestly desires to encourage real scientific work and literature, let him permit such men as Hall, Newcomb, Pickering, Young, Stone, Holder or Draper to arrange the title of his prize astronomical essay, and request them to name the conditions, and be the judges, of the merits of the papers submitted. The decision of any two of the gentlemen we have named would be satisfactory to those who are likely to be competitors, provided they acted independently, and untrammelled by Mr. Warner or any of his Rochester friends.

HYPERMNESIA OR EXALTATIONS OF MEMORY.*

[Translated from the French by the Marchioness CLARA LANZA.]

Until now our pathological study has been confined to destructive forms of memory. We have seen the latter diminished, sometimes completely destroyed. There are however, precisely contrary cases, in which the apparently abolished memory comes to life again as it were, and faint recollections become intensely vivid. Is this exaltation of the memory (called technically hypermnesia) a morbid phenomena? It is at least certainly an anomaly. When we remark further that it is always connected with some organic disorder or bizarre condition, we cannot deny that it comes within our province to discuss it. There are other subjects, amnesia for instance, which are more instructive, but we should not neglect it for that reason. We will see therefore what there is to learn about *persistence of recollections*.

Hypermnesia is divided into two classes—general and partial.

General exaltation of memory is difficult to determine, because the degree of excitation is quite relative. The force of this faculty varying to a great extent in different individuals we cannot measure it by any common standard. The amnesia of one person may possibly be the hypermnesia of another. It is, if we may employ the word, a change of *tone* in the memory, such as occurs in every other form of psychological activity, thought, imagination or sensibility. Moreover, when we say that the excitation is general, it is nothing more than a probable induction. Inasmuch as the memory is subject to the condition of our consciousness, and as consciousness is only produced in the form of succession, all that we can affirm is, that in the course of a period more or less extended a mass of recollections spring up in every direction.

General exaltation seems to depend exclusively upon physiological causes, particularly the rapidity of cerebral circulation. It is therefore apparent very often, in cases of acute fever. It is also produced in insanity, ecstasy, and hypnotism, sometimes in hysteria and in the beginning of certain mental diseases.

Besides these purely mental pathological instances there are others of a more wonderful nature which depend probably upon the same cause. Numbers of persons who narrowly escaped drowning have stated, that in the moment when asphyxia began, they seemed to see all at once their entire life in all its details, even the most

* See *Les Maladies de la Mémoire* by Th. Ribot, Paris 1881.