

would have required *less* excavation than the actual scheme? In the second place, as Mr. Login says, there would be locks at either end of the canal, which would be not only costly, but most inconvenient for ships in their passage. In the third place I doubt very much whether the whole stream of the eastern branch of the Nile would suffice to keep the canal and the great Bitter Lakes full. Some time ago, indeed, it was disputed whether the Mediterranean and the Red Sea *together*, pouring into the Bitter Lakes, would raise them to the level of the sea, owing to the influences of absorption and evaporation. The facts, however, proved to the contrary.

Still, Mr. Login is much more ambitious. With a *single* stream (that is to say, taking the eastern branch of the Nile at Damietta), less in volume than the present maritime canal, he proposes not only filling the Bitter Lakes to the level of the sea, but raising them to a level of at least twelve feet beyond it (thereby nearly doubling their present volume). Lastly, if the canal and Bitter Lakes could be filled sufficiently by the Nile spring the dry season, it would be overflowing during the floods, and if it could be filled only in the season of the floods, in the dry season it would be nearly empty.

As to the question of breakwaters at the Mediterranean end, Mr. Login rightly says that the annual deposit along the coast is hardly perceptible. I cannot see, therefore, what improvement the breakwaters he suggests would be upon the present ones, seeing that the easterly current *now* passes the extremity of the west pier with a speed of two or three miles an hour. He therefore not only proposes sending a current of at least five miles an hour for a considerable distance up the canal (as his plan infallibly must)—rendering it in strong prevailing winds almost impossible to get out from between his breakwaters—but also sacrificing a splendid harbour of 550 acres in extent.

I quite agree with Mr. Login in thinking that the Suez Canal will not only outlive all abuse, but become one of the greatest blessings to the civilised world.

Birkenhead, Nov. 11

EDW. RAE

The Poles of Mars

PERMIT me through your columns to inquire whether any experiments have been made, by polarisation, to test the statement that the light from the brilliant spots round the poles of Mars is *reflected*?

If nothing has yet been done, will some correspondent decide the point?
G. W.

Nov. 25

Lectures to Ladies

IN the fourth number of NATURE there is a letter signed "M." on this subject, in which it is asserted that nearly all the women who most wish to attend these lectures, and who would most benefit by doing so, "are practically shut out from those at South Kensington and at University College, because none of the lectures are given in the evening." Your correspondent gives South Kensington credit for saying something about "persons engaged in tuition," but she adds that it is a mere mockery, as this very fact prevents their getting out in the daytime.

I can confidently say that the Committee for the Higher Education of Women most earnestly desires to interest and benefit those who are teaching others, and who feel the necessity of a better education for themselves; but I believe that the wider and more general object of the whole movement (of which this small committee for South Kensington and Chelsea forms a struggling and isolated element) is, not *so much* to improve those who are already engaged in teaching, as to elevate the tone of education amongst girls who will eventually be teachers, whether as governesses or as mothers.

This I think is enough reason for giving the lectures in the daytime, for it would be difficult for girls to come out alone to classes in the evening. Of course it is hoped that in time a regular system may be established for the training of teachers and students at once, but meanwhile we can but trust that even these weak forces, if they are rightly directed, may have some good effect, if it is only in awakening an interest in these subjects amongst those who can help.

It is very difficult, in London especially, to get at the class of students which we most wish to benefit. I think the fact is that, in London at least, schoolmistresses and governesses are, with a few exceptions, inclined to be narrow and conservative on the subject of educational improvements. If they would only come forward and interest themselves in the scheme their co-operation would be most valuable.

I hope that your correspondent "M." and others who feel as she does, may see this letter and will understand how difficult it is at the outset to satisfy so many conflicting requirements at once.

The course of lectures on Greek History and Literature which Mr. W. R. Kennedy is now giving on Saturdays at the South Kensington Museum is very thinly attended, which is exceedingly discouraging, especially as particular pains have been taken to make these lectures strictly educational, by means of questions set to be worked at by the students at home.

Brompton, Nov. 30

M. A. B.

The American Eclipse

DR. MORTON, Professor of Chemistry in the University of Pennsylvania, has kindly forwarded me photographs of the phenomena of totality. By combining in the stereoscope pairs of these, separated by intervals of about half-a-minute of time, the black globe of the moon appears projected far in front of the luminous prominences and the corona, which are, therefore, clearly seen to belong to the sun. Glass transparencies from negatives specially selected for this purpose, and appropriately mounted, would show these phenomena in a very striking manner.

WILLIAM CROOKES

NOTES

TO-NIGHT the physicists take their turn at the Royal Society, and the physical constitution of the sun will form one of the subjects dealt with.

WE believe that the communication to be read at the Royal Geographical Society on Monday will be one of great interest.

A PERIODICAL, after the model of the popular *Annales des Sciences Naturelles*, will be commenced in Paris at the beginning of the year. It is to be named the *Annales des Sciences Géologiques*. We are promised an important and fully illustrated memoir on the Geology of Palestine, by M. Lartet. The editors of the new journal will be M. Alphonse Milne-Edwards for the Palæontological, and M. Hebert for the Geological departments.

THE Swedish Academy of Sciences has just issued, under the title "Lefnadsteckningar öfver Kongl. Svenska Vetenskaps Akademien efter År 1854 afidna Ledamöter," the first number of a series of biographical notices of those of its members who have died since the year 1854. In the absence of the preface, which is deferred until the publication of the second number, we are unable to say whether all the members of the Academy are thought worthy a special biography, or only its most distinguished members. However this may be, we fear that very few of the twenty men, whose lives are recorded in this first number, are known to fame beyond the limits of their native land, notwithstanding that most of them have left behind them honourable records of scientific labour. We do not say all of them, because we notice an archbishop and a bishop, whose claims to admission to the Academy must, judging from their published works, have rested upon their social position or general attainments rather than upon their scientific labours.

WE have been favoured by Professor Newton, of Yale College, with the following notes as to the November star-shower:—"We were unfortunate here this year in observations upon the November meteors. Both nights, the 13th-14th, and 14th-15th, having been overcast. Through breaks in the clouds we saw a few stragglers, some of which were true November meteors, radiating from Leo, and leaving for an instant the soft trail peculiar to those bodies. But the number of meteors during the hour between three and four a.m. of Monday morning was probably not more than double or treble the usual number for any morning. The small part of the sky visible prevented any reliable estimate of numbers. Similar weather has rendered observation impossible at every station from which I have heard."

FROM a preliminary report made to the Association Scientifique de France, by M. C. Wolf, of the Imperial Observatory of Paris,