

Now, it is well known that the active volcanoes emit vast quantities of aqueous vapour and carbonic acid gas. Here, then, we have a factor that may give us the desired data, provided evidence can be adduced that there has been sufficient variability in volcanic activity. When we look over the various geological epochs of the earth's history and their accompanying formations, which are to a great extent a matter of chemical combinations, and the latter are largely dependent upon temperature, it is found that volcanic activity has been variable. From this, then, we seem to be justified in believing that the surface heat of the earth has suffered changes through the varying quantity of carbon dioxide present in the atmosphere, and a change sufficient to produce those long period climatic changes that certainly have existed on our earth, and which have left such indelible evidences of their presence at one time. Granting the modifying heat effects of carbonic acid gas, we may take into consideration the work of man. I allude to the consumption of coal. Two processes take place for combustion—oxygen is withdrawn from the atmosphere, and carbon dioxide is added, the latter stimulating plant assimilation besides raising the general temperature, as we have seen above, and the former assisting in the restoration of the equilibrium of the oxygen in the atmosphere, as we know that plants in general exhale oxygen. To that the depletion of our coal beds is not an unmixed evil, and it might be added that the smouldering of our coal deposits, which have been going on for a long time in the Mackenzie basin, may mitigate the climate there to an appreciable degree. These deductions are qualitatively sound, and they may be so quantitatively.

Before leaving this subject of Solar radiation and absorption, it may be stated that the most recent researches on this subject give, for what is known as the Solar constant; about 2 calories, *i.e.*, the direct rays of the sun after allowing for atmospheric selective absorption, would heat a gramme of water 2° C in one minute.

[*English Mechanic.*

Notices of the Society.

Election of Members.

The attention of members is invited to Bye-law No. 14, regulating the election of persons who desire to join the Society. It is hoped that those who are already members

will induce others to join. Forms of application can be had from the Secretary, Mr. P. N. Mukherjee.

The Library.

An opportunity will occur during the next few months, owing to one of the members of the Society going to England, of obtaining books cheaply there for the library. A subscription list has already been opened, and several members in Calcutta have subscribed and enabled the Council to make a beginning with the Library. Other members outside Calcutta, however, have not yet come forward, and as the Library will be one of the most important adjuncts of the Society, and will be available to members both in and out of Calcutta, those who have not done so are invited to help the Society in making a good start with this important branch of the work. Suggestions as to useful books for the Library will also be welcomed by the Librarian.

A number of books have already been received and can be borrowed by members in accordance with the Bye-laws in the last number of the JOURNAL.

The books available can be ascertained from the Assistant Librarian and a catalogue will issue shortly. The reading room of the Society in the Imperial Secretariat is now opened for the use of members daily from 5 to 7 p.m. except on Wednesdays and holidays, and from 3 to 5 p.m. on Saturdays, unless that day is a holiday.

Subscriptions.

Some of the subscriptions are still due for the current session from members. Those who have not yet done so are requested to remit the amounts to the Treasurer.

The Treasurer will also be glad to receive those donations promised for the Library and quarters which have not already been paid, as the Council wish to take full advantage of the promised assistance as soon as possible during the present session.

Classes for Beginners.

The Council have arranged to hold a series of four classes for beginners in Calcutta, to enable those who wish to learn the rudiments of the science and how to use their Star Charts to do so. Mr. B. M. Rakshit, late of the Alipore Observatory, has kindly consented to hold the classes, and the names of those who wish to take advantage of the classes should be sent to him at 77-3, Musjid Barry Street, Calcutta, or to the Secretary, Mr. P. N. Mukherjee, without delay.

Meetings.

The ordinary meetings of the Society will be held on the following dates :—

1911.

May 30th | June 27th

The meetings will commence at 5 p.m. and, until further notice, will be held in the Imperial Secretariat (Treasury) Buildings.

Addresses of Officers.

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