

Prominent in the study of these changes must be the life-history of the people most concerned in them. The lesson from all these lives, for all of us, is their thoroughness and beneficence. If half the attention of schools, colleges and mature citizens that has been given to Alexander, Cæsar and Napoleon had been devoted to Faraday, Pasteur, Lister and Bessemer, the world would be a different and a better world

to-day. Because, not only were these men remarkable discoverers, to whom we owe far greater security and amenity of life than our forefathers could enjoy, but their methods of work and their outlook towards their fellow-beings display just those qualities most needed for smooth and continued progress of civilisation; patience, honesty and thoroughness in their labour combined with inexhaustible goodwill towards mankind.

Letters to the Editor.

On the Discovery of *Prothallus* in Indian *Ophioglossums*.

THE genus *Ophioglossum* has interested a number of botanists in India and abroad on account of its peculiar systematic position in the Pteridophyta. Attempts are often being made to throw more light upon its life-history simply by the study of the sporophyte generation. But the gametophyte generation has not been so well studied owing to several difficulties in its way. It is, however, to be noted with satisfaction that it was studied in a few species of *Ophioglossum* during the latter half of the last century and in the beginning of the present century by some eminent workers. Mettenius, for instance, studied *O. pedunculatum* as far back as 1856, while Dr. Lang studied prothalli of *O. pendulum* in 1902; and Bruchmann studied the *Ophioglossum vulgatum* in 1904. Later on Dr. Campbell confirmed the results of these authors by his study on *O. moluccanum* and *O. pendulum* in 1906. Since then no attempts appear to have been made either by way of confirmation of old results or by way of investigation of new ones.

It was in 1930 that my attention was drawn to this subject by some remarks on *Ophioglossum* made by Prof. Dixit in his book and I began to study it, more critically since 1931. My observations by the cultural methods—later on confirmed by the gametophytes that I could obtain in nature—I have been able to discover the prothalli of some four Indian species which appear to be different from those that have been studied by previous botanists such as Dr. Lang and others.

The peculiar methods used in obtaining them have been summarised in my "*Rationale* of the germination of the spores in

Ophioglossum" which will soon appear elsewhere.

My further researches on this structure have given me a wealth of new facts and allowed me to throw a good deal of light on some previously unsolved points. It was very kind of Prof. Dixit to confirm my results later and I offer my sincere thanks to him and to my two colleagues Messrs. Deshpande and Kanitkar.

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Theory of Parallel Deposits of Solute by Evaporation from the Walls.

D. OWEN before the Physical Society of London, 22nd May 1932, gave a demonstration of the difference of heights to which (1) fuchsin, (2) salt solution, and (3) a mixture of the two solutions respectively would rise in a strip of filter paper dipping into these solutions.

In repeating the experiment, we noted the formation of very beautiful parallel deposits. One of us, in a paper on the variability of Avogadro's Number (S. Ray in *Zeit.f.phys. Chemie*, **128**, 186, 1927) has shown that in a solution or sol the concentration variation with height follows a curve as in Fig. 1 while in another paper on A Physical Factor in Liesegang Phenomenon (*Koll. Zeit.*, **44**, 277, 1928) the same author has shown that this concentration distribution has the possibility of explaining Liesegang phenomena. Thus, if in the graph, AB is a line parallel to OY, the Y axis, such that tangent at C is parallel to the tangent at D, it means at these two points not only are