

cluding a new genus, *Barkerwebbia*, under the *Arecineæ*, and a revision of the order for the Philippines. Prof. U. Martelli describes a number of new species of *Pandanus*. A review of European umbellifers, in which the writer includes the *Araliaceæ*, forms the subject of a lengthy paper by Dr. B. Castellani. Prof. E. Bartoni publishes a short MS. by Parlatore on Linnæus's herbarium which is especially appropriate, as Webb and Parlatore were friends, and held each other in mutual esteem.

A Course in Mathematical Analysis. By Édouard Goursat. Translated by E. R. Hedrick. Vol. i. Pp. viii+548. (London and Boston: Ginn and Co., n.d.) Price 16s.

THIS readable and trustworthy translation will be welcome to those who cannot enjoy the original, the merits of which are by this time well known. The typography is unusually good, and is very creditable to all concerned, such symbols as the square of a_1 , or even of a' , being printed in a satisfactory way, which English printers might imitate with advantage. There are a few terms here and there which are ungrateful to an English ear; "involutionary" or "involutional" would be more agreeable to analogy than "involutory," and "nappe" is retained instead of being rendered by "sheet." But these are trifles, and those of us who have no French can now study a treatise which is eminently lucid and attractive, as well as being up to date and sufficiently rigorous for the purpose it is designed to fulfil.

LETTERS TO THE EDITOR.

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Agriculture and the Empire.

THE article by Sir W. T. Thiselton-Dyer in your issue of March 22 is a fair statement of the position the Home Country should take in the development of agriculture in the Empire at large, and of the necessary training the future experts and researchers in Indian agriculture should receive; and this view requires pressing upon those responsible for the development of agriculture in our colonies, so that the policy of employing as agricultural experts men with a mere smattering of scientific method, combined with a more or less thorough knowledge of British agriculture, may not be followed. Investigation and careful research are wanted, and the only men who can perform this are those whose sense of proportion and scientific methods of attack have been developed by a systematic training in the sciences having a bearing on agriculture. Agriculture is at once a science, an art, and a business, and the successful agriculturist at home must be a man equipped with an adequate knowledge of all these subjects, combined with a special ability for one or more of them.

The agricultural colleges of Great Britain afford a training in the science and art of agriculture, but on the business side of the subject not much can be attempted, as personal experience and responsibility of the individual for his business transactions are necessary conditions. Many agricultural colleges and agricultural departments of our universities possess the necessary scientific equipment and a staff of adequate attainments to give to the future Indian or colonial expert a thorough systematic training in such sciences as chemistry, botany, and zoology, in an agricultural atmosphere. The latter condition must be of immense importance in impressing on the student the relations of the pure science to practice; and although the practical application he will experience abroad will differ essentially from that observed at home, he will at all events be prepared to use his science to solve problems of economical value, and, if his training has been broad and

thorough, to become a most useful factor in developing the agriculture of the country. It is certain that a man trained at an agricultural college or at an institution equipped with the necessary facilities for the study of animal or plant life will be better able to enter upon his duties as investigator of agricultural science in India than a man whose training has been received at the ordinary technical college. From the staff and students of this college during the past few years experts have gone: to South Africa, four, including the director of the Transvaal Agricultural Department; to India, four, including two to Pusa; to British Guiana, the West Indies, and Egypt, two, as well as to other countries, so that it can claim some connection with agriculture in our colonies.

Sir W. Thiselton-Dyer says that notice should be given five years in advance of the requirements for trained men; with this opinion I agree, though I doubt its practicability. What we require is more men of recognised ability to train for such position. Hitherto some branch of technical work other than agriculture has been the object, to a great extent, of the trained student, but now that there is a future for highly trained men who will bring their scientific knowledge and spirit of investigation to bear upon the problems of agriculture at home and abroad, we hope that men of the right stamp will come to be trained partly perhaps in this country, and afterwards under the conditions in which their future work will lie, but in any case to go through a complete course of systematic study in the science to which they intend to devote themselves when they have gained their technical experience. It is a fact, and one to be deplored, that the agricultural students are not always drawn from the best of our rising generation, since farming is looked upon as the profession to be engaged in by those "who are too clever for the Army and not stupid enough for the Church"; but now that we can offer a field for a well trained man to make a name and a living in the domain of agricultural research, we should secure a greater proportion of suitable men. In this country, for the researcher, apart from the teacher, there is little chance for a trained man to earn a livelihood, but abroad, where the resources of the soil have yet to be developed, there is a good prospect of employment for men who are thoroughly equipped with the requisite scientific knowledge and possess the spirit of investigation.

Another point to which Sir W. Thiselton-Dyer has directed attention is the proper teaching of science in our rural elementary schools, and, I would add, our rural secondary schools. How often do we see, especially in the latter class of school, the teacher (who is often selected for his chemical knowledge) teaching by book alone, and without reference to the conditions amid which his scholars live. Chemistry is one of the least suitable of the natural sciences to teach children whose lives will be, or ought to be, spent in the country. Botany or zoology taught by a teacher who has learnt these subjects, and has been trained in their application to outdoor life as it exists in an English farm or country village, would be far preferable, and I venture to think that Kew, the agricultural departments of our universities, and our agricultural colleges could supply such teachers, and so could influence to a considerable extent the value of the teaching in country districts.

The Board of Education has, I understand, the latter matter in hand, and I trust that under the advice of their excellent rural inspector a scheme will be formulated which will in some way check the tendency of modern education to prepare solely for town life. M. J. R. DUNSTAN.

South-Eastern Agricultural College (University of London), Wye, Kent, March 26.

Sea-sickness and Equilibration of the Eyes.

MANY people have no doubt noticed, when travelling by sea, that the motion of the ship could be seen very distinctly, even when there were no hanging lamps, draperies, or fixed points, such as the horizon or clouds, within range of sight.

Some may think that seeing the motion in this way is due to the imagination receiving its suggestions from the motion of the internal organs, and especially the stomach, for I am here supposing the body to be held perfectly rigid.