

Church Cottage, their home in Marylebone Road, was open house to friends of all ages. In this oasis from London's rush, many sought both help and advice; none was refused. Free from worry over the more material aspects of life, his help to those in straitened circumstances was often more than words. Generations of students think with affection and speak with reverence of their old teacher and friend. Childless himself, *they* were his 'boys and girls'. When he came to King's, our College was enriched; by his death the whole scientific world is made poorer.

It is difficult to write truthfully about Halliburton without appearing to exaggerate. His character, his scientific accomplishments, his nature, his industry, his very life itself, make him one we can but mourn and do no more than try to copy.

J. A. HEWITT.

DR. RUDOLF MARLOTH.

WE record with deep regret the death of Dr. Rudolf Marloth, the distinguished botanist, who has been so closely associated with botanical work in the Union of South Africa. Dr. Marloth's profession was that of a consulting analytical chemist, but it is with regard to his botanical work that he is best known in the domains of science.

On the foundation of the Botanical Survey of South Africa, he was appointed a member in the year 1918, but before that time he had gained a reputation as a botanist with a wide knowledge of the flora of the Cape region. He was president of Section B of the South African Association for the Advancement of Science in Cape Town in 1903, and was president of the whole Association at Kimberley in the year 1914. He was also president of the Cape Chemical Society in 1913.

Marloth was the author of many botanical works and in particular "Das Kapland", which was published in 1908 and gives a general phytogeographical account of the vegetation of South Africa. This fine work is profusely illustrated, mainly from photographs taken by himself; for Dr. Marloth was, among other things, an expert photographer and an acute observer of biological factors in relation to plant life. Another monumental work is his "Flora of South Africa", planned to occupy four volumes, three of which have now been published; the first volume appeared in 1913, and this also was magnificently illustrated with both photographs and coloured plates. This is not a 'flora' in the strict sense of the term, as only a portion of the genera and species is dealt with and the Gamopetalæ have not yet been published. It is, however, a work which all those interested in the wonderful flora of the Cape region find indispensable for the proper study of the flowers of South Africa. He also published, in the year 1917, a "Dictionary of the Common Names of Plants of South Africa". In this volume, some two thousand records of common names of plants found in South Africa are given, and the list is particularly useful to the overseas visitor, since the Dutch have common names for most of the more conspicuous and gener-

ally distributed plants. One of his earliest works was his "Elementary Botany for South Africa", which was published in the year 1897.

Dr. Marloth travelled widely in Africa in the course of his duties as an analytical chemist, and had a wide circle of friends, particularly among the Dutch, who helped him considerably in his botanical studies. In connexion with his work on the Botanical Survey, he collected together a fine herbarium, which was remarkably rich in the Euphorbiaceæ and other succulent plants belonging to the Cape Province. The collection was rendered all the more valuable by the inclusion of photographs of these plants, giving their characteristic features in careful detail. Such photographs in the case of 'fleshy' plants are of very great value to the botanical student, and his herbarium, which will pass to the National Herbarium at Pretoria, will be invaluable to botanists carrying on researches on the flora of South Africa.

Dr. Marloth was a man of great energy and a delightful companion in the course of a botanical ramble. Having had an opportunity of spending some nine strenuous hours in his company on Table Mountain last November, one was able to realise the great extent of his knowledge of the Cape flora, and also his untiring energy as a walker; for, despite his age, he was able to outwalk many a younger man. His unexpected death will be a very great loss to botanical science, not only in South Africa but also to the world in general.

A. W. H.

PROF. JAKOB ERIKSSON.

JAKOB ERIKSSON, whose death, on April 26, we regret to record, was born in Hyllie, near Malmö, Sweden, in 1848. After a course of study at the University of Lund, he obtained his Ph.D. in 1874, and the same year was appointed lecturer (Dozent) in botany at the University. A year later he was called to Stockholm, where, besides teaching botany in one of the State colleges, he was engaged as plant physiologist at the experimental station of the Academy of Agriculture. In 1885 he became professor and director of the department of plant physiology of the Academy, a position which subsequently comprised the department of agricultural botany. Prof. Eriksson held this position until 1913, when he had reached the age limit, entitling him to a pension. He, however, continued his research work until shortly before his death, and published several books and monographs during his retirement. His primary interest centred on the study of the diseases of agricultural plants, more especially mildew, parasitic fungi, etc. It was very largely due to his energy and initiative that the plant physiological laboratory at Frescati, near Stockholm, was created.

Prof. Eriksson was a member of scientific academies in several countries and received numerous awards for his contributions to the knowledge of plant diseases and their treatment. A species of fungus in the Hysteriaceæ group has been named after him, and in 1923 an international prize for

research in plant pathology was instituted at Wageningen in his honour. He represented Sweden at nearly all of the international congresses on horticulture and plant physiology, and devoted a large part of his time in the interest of the International Institute of Agriculture in Rome.

In addition to the work mentioned above, Prof. Eriksson took a keen interest in pomology, and for a number of years edited the *Journal of the Swedish Garden Association*.

WE regret to announce the following deaths:

Mr. W. F. Denning, a leading authority on meteors, discoverer of several comets, and of world-wide reputation as an astronomical observer, on June 9, aged eighty-two years.

Baron Kitasato, For.Mem.R.S., of the Imperial

Pathological Laboratory, Tokyo, Japan, noted for his work in bacteriology, especially with reference to the artificial production of immunity to disease, on June 14, aged seventy-two years.

Dr. R. C. Macfie, Thomson Lecturer in the University of Aberdeen for 1929, and author of a number of notable biological expositions, as well as of volumes of picturesque verse, on June 9.

Dr. Warner J. Morse, director of the Agricultural Experiment Station, Orono, Maine, on Mar. 25.

Prof. S. W. Parr, emeritus professor of practical chemistry in the University of Illinois, known for his researches on fuels, on May 16, aged seventy-four years.

Mr. H. Tomlinson, F.R.S., formerly principal of the South-Western Polytechnic, Chelsea, on June 12, aged eighty-four years.

Mr. R. T. Wright, formerly fellow and tutor of Christ's College, Cambridge, and secretary of the University Press, on June 11, aged eighty-five years.

News and Views.

THE doctrine of the inheritance of acquired characters is by no means so dead as its opponents thought a generation ago. The effects of Weismann's knock-out blow are wearing off, and the heart begins to throb again, somewhat irregularly, but gaining strength all the time. In his Royal Institution Discourse of June 5, on "Habit: The Driving Factor in Evolution", printed in a special supplement this week, Prof. E. W. MacBride takes a strong stand on the side of the heritability of acquired characters. Dissatisfied with the evidence formerly adduced for the occurrence of evolution, he re-examines the question along three lines which he regards as the only possible approaches. These are: the line of racial differentiation amongst animals at the present day, the line of fossil evidences of past specific changes, and the line of embryonic and larval development. And each of these lines, traced to its end, leads Prof. MacBride to the conclusion, which would have delighted Lamarck as it will shock many adherents of orthodoxy, that habit or change of habit is at the bottom of the changes of structure which represent the difference between one species and another. The interesting examples cited in support of the thesis will be eagerly scanned, but whether all of them will satisfy the doubters is another question.

To take the case of the blenny or viviparous eel of the Lym fiord, the individuals of which at the mouth of the fiord are longer and slimmer than their relatives higher up, without direct proof it is unsafe to assume, and the argument is based on the assumption, that the difference is due to different habits. May it not be that the differences represent responses to physical differences in the environment, such as varied densities or salinities? Racial differences may be due to habitat as well as to habit, and until the one possibility has been eliminated the other cannot be taken for granted. In a similar way it is possible to imagine that the reversion of the spherical race of the nematode, *Heterodera schachtii*, in the potato, to the lemon seed form when it feeds again on beetroot, may be due to physical or chemical properties of the juices it feeds upon—a physical rather than an organic reaction.

But this sort of objection to regarding habit in every case as the initiator of structural change does not apply to other examples cited by Prof. MacBride, and we view with sympathy his championship of the directive force of the organism in the evolutionary race.

In an article on "The Scientist and the Technologist in the Textile Industries", published in the *Journal of Textile Science*, Prof. E. F. Barker discusses co-operation between men of science and technologists and problems of their training. Prof. Barker points out that the technologist, or 'practical man', as he is frequently described in the textile industries, has attained his results much more by judgment and less by rule of thumb or haphazard methods than the man of science frequently imagines. Examples are quoted of textile problems faced and evolved along inductive lines of reasoning by the technologist, which indicate that some technologists at least may claim to be scientific workers within the sense of Sir Arthur Eddington's definition of science as "an attempt to set in order the facts of experience". The training of the technologist in the best of our technical colleges has been based largely upon system and not mere synopsis, and upon basic inductive methods. The technologist thus chiefly needs the cultural scientific training, based upon the extensive outlook or extensive "Science Discipline" suggested by Sir David Prain. The man of science, on the other hand, is essentially an analytical worker; and a fundamental defect of our present university training is that, while taught to appreciate facts, its graduates are frequently quite unable to assess values, especially human values. This defect has largely been responsible for the slightly contemptuous attitude towards industrial research once common in university circles, and makes the exclusion of the technologist from association with the man of science in the activities of the research associations catastrophic. Probably nothing would more rapidly ensure the provision of adequate support for such associations from the industries themselves than effective co-operation between the scientific worker and the technologist.