

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 knockout 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.