Waite. On relinquishing control in the museum Sir Edward was appointed honorary curator in ethnology, which position he filled to the time of his death.

L. M. HARWOOD,
Acting General Secretary.

Public Library, Museum, and Art Gallery of South Australia, Adelaide, South Australia, June 4.

LABOUR AND THE HIGHER VALUES.

AFTER the weary and fruitless efforts of the past century by those engaged in enlarging the boundaries of truth to educate their masters to an appreciation of the national importance of such higher values, it is a relief to turn to their frank espousal by the representatives and spokesmen of Labour in this country and in America. To those for whom Labour stands for everything that is evil in the best of all possible worlds and who are content to absorb their judgments on contemporaneous problems with their breakfast, such a view will be bizarre. But scientific men who are accustomed to deal with facts, and form their conclusions therefrom, cannot fail to be interested in the very marked growth of appreciation in the humanitarian value of their work which has occurred in the ranks of organised Labour.

At its recent Atlantic City convention, as announced in last week's issue of NATURE, the American Federation of Labour resolved adequately and generously to support the activities of the Federal Government in pursuing, strengthening, and extending a broad programme of scientific and technical research as being of major importance to the national welfare. The resolution was based on five grounds: That the work forms the fundamental basis of all modern industry; that the increased productivity and well-being of the whole population ensuing therefrom are of far greater value than the cost of the work; that, after all possible methods of readjustment, there is a limit to the increase of the average standard of living in the community, which can be raised only by research and the utilisation of research in industry; that it is necessary for the solution of many of the most pressing problems immediately confronting the Governments; and, lastly, that the war has brought home to all the nations engaged in it the overwhelming importance of science and technology in war or peace.

In this country the Labour Party in its Report on Reconstruction last year, entitled "Labour and the New Social Order," insisted on greatly increased public provision being made for scientific investigation and original research in every branch of knowledge, and for the promotion of music, literature, and the fine arts, upon which any real development of civilisation depends. It is humiliating also to note that it should have been a deputation from the Education Committee of the Labour Party who found it necessary to point out to the President of the Board of Education the grave injury done to the cause of education by the exclusion from the older universities of men without money but with brains, and the welcome apparently accorded to men with money but without brains.

So far as the evidence goes, the causes of scientific education and scientific research at least seem to stand to profit enormously by the advent of a Labour Government. The view, of course, may be taken that this is the traditional lip-service to the higher values paid by all political aspirants for power alike, though the political expediency of expressing such sentiments in this country is not obvious. At least, if it be mere vote-hunting demagogy, it is of a startling and original kind!

Labour may be trusted to make one important contribution to government which has been too long lacking, in that it cannot fail to realise the fundamental importance of the productive and creative elements in the community. It is not likely to make the mistake of putting the cart before the horse, an amusing illustration of which is our habit of speaking of commerce and industry. One may expect that if it intends to foster scientific research its efforts, however mistaken, will not be open to the interpretation that the resources of the State will be used for the exploitation rather than the encouragement of the research worker.

Sums, by previous standards munificent, have recently been voted by Parliament for fostering scientific research. What scientific investigators have so far mainly got is a set of rules and conditions that some lawyer had drawn up presumably, by which any investigator who is so hard-up as to accept money from this source puts himself outside the law with regard to any commercial rights that may ensue from his work and vests them in the Government. Willing as scientific men may be that their brains should be exploited for the benefit of the community, it must be remembered that the community is a vague term comprising drones as well as workers. Those to whom the destinies of civilisation have been entrusted during the past century have not shown themselves either very generous or very intelligent in their appreciation of the higher values which make for national well-being and prosperity. Under them, slums and millionaires have been the chief output of creative science, which certainly could not be in worse hands under Labour. The intense appreciation of the higher values that is growing up among the leaders of Labour is perhaps the most hopeful sign of the times, and the education of the workers into the real aims, uses, and aspirations of science now, more than ever, calls for the co-operation and support of scientific men.

F. SODDY.

AUSTRALIAN RAINFALL.[1]

IN the continent of Australia rainfall is by far the most important meteorological element to the agriculturist, there being large tracts of country where the annual precipitation is barely

[1] "The Australian Environment (especially as Controlled by Rainfall)." By Dr. Griffith Taylor. Pp. 188+plates. (Melbourne, 1918.)

sufficient to allow of profitable use of the soil for farming or raising stock. For this reason Dr. Griffith Taylor, who is becoming well known for his work on Australian meteorology, has recently produced a volume devoted entirely to the rainfall of the continent and its control over vegetation. The subject is dealt with in a very thorough manner, and it would be hard to overestimate the value of such a work in the case of a young agricultural country looking to great developments in the near future. To obtain a just appreciation of the meteorological conditions which govern the weather of the continent it is necessary to remember that the southern tropical high-pressure belt crosses the southern part of the country, while the equatorial low-pressure area lies off the northern coast. These systems fluctuate north and south with the sun, causing a very marked annual period in the rainfall. Thus the northern districts receive most of their rainfall in the southern summer, when cyclones from the northern low-pressure area strike the coast. On the other hand, the southern districts at this time of year lie under anticyclonic conditions and receive little rain, but in the winter, when the high-pressure belt has moved northward, the westerly winds of the southern oceans reach this region and the rainy season occurs. This movement to the north and south of the pressure systems and associated phenomena is well illustrated by an ingenious "Solar Control Model" which forms the frontispiece of the present volume.

To the casual student who is acquainted with the desert regions which cover a large part of Western Australia and has been in the habit of regarding the whole district as one of great aridity it may come as a surprise to learn that over a small coastal area running southwards from Perth the annual rainfall amounts to more than 30 in., a quantity which is equalled only in narrow belts along the south-eastern, eastern, and northern coasts. Furthermore, a map which Dr. Taylor has prepared shows that the "rain reliability" from year to year reaches a very high level in this tract of Western Australia, so that the lot of the farmer should be a happy one, at least so far as rainfall is concerned. The most variable and untrustworthy rains are found in the arid centre of the continent, where the annual fall amounts to about 6 in. only, and fluctuates widely from year to year. The chart of "rain reliability" forms a valuable feature of the book, as in regions where the fall is barely sufficient for farming it may make all the difference whether an almost constant fall can be expected from year to year, or whether periods of exceptional rain are likely to be followed by spells of drought through which no farming can be carried on. In a previous publication the author has made use of the "climograph," or temperature-humidity curve, for indicating graphically the suitability of a climate for man. As regards suitability for plant life rainfall is a more important element than humidity, and the "hythergraph" is here introduced to indicate changes of temperature and rainfall throughout the year. Hythergraphs are reproduced for typical extra-Australian wheat-, rice-, and cotton-growing lands, and by comparison with Australian curves indicate the possibilities of the different parts of the country for these crops. Tea and coffee growing is also considered in the same way.

For a detailed discussion the country is divided into fifteen districts, for each of which the conditions are considered very fully. An attempt is made to ascertain the type of pressure distribution which causes rain in the different regions, and each fall in the course of the lustrum 1910–14 is ascribed to one or other of certain pressure types. It may be questioned whether the cause of rainfall suggested on p. 58, the chilling of an air mass by contact with a colder body of air, is really productive of appreciable rain. In most cases of this kind an easier explanation seems to be found in the convection effects which are likely to be set up. The work is very fully illustrated, but one misses a good map of Australia whereon the different towns and districts mentioned could be located without the trouble of turning up an atlas. It is impossible to read a work of this kind without regretting that meteorologists have devoted so little attention in the past to measurements of evaporation. There can be few districts of the world for which any adequate evaporation data are available, and yet in a country like Australia the loss of water by this means must be second only in importance to the supply by rainfall. A very large amount of trouble must have been involved in the preparation of such a comprehensive work as that under notice, and students of Australian meteorology, as well as those responsible for the development of the country, have reason to be grateful to Dr. Griffith Taylor for the result of his labours. J. S. D.

GUSTAV MAGNUS RETZIUS.

PROF. GUSTAV RETZIUS, who died at Stockholm on July 21, aged seventy-seven, did more to enrich anatomical literature than any other man of his time. By his death there comes to an end a line of anatomists that has made Sweden famous for a century and more. Retzius's grandfather was professor of natural history at Lund; his father, Anders Retzius, the intimate friend of Johannes Müller, held the chair of anatomy in the Caroline Medico-Chirurgical Institute, Stockholm, in which he was in due time followed by his son Gustav, who devoted his life to working out, by improved methods, lines of research commenced by his father. In 1842, the year in which Gustav was born, Anders Retzius recognised that the form of the human head was an important mark of race, and initiated the system of describing the shape of heads and skulls by the proportion which their breadth bears to their length. Like his father, Gustav Retzius was an anthropologist