

grows in the Garden of the Hesperides, whereas in ancient times it grew only in the far southern deserts, the flora of which has therefore spread northward. Pliny, however, mentioned the plant as found in the Garden of the Hesperides, and *Thapsia garganica* grows abundantly in the very area where the main supply of Silphium was found. Hence the identity of these plants would support the view that there has been no climatic change and no shift of vegetation in Cyrenaica since classical times.

The weakness of some of Prof. Schwarz's arguments does not necessarily invalidate his scheme, and it is to be hoped that they will not prevent its full investigation. He draws a gloomy picture of parts of the Karroo and southern Free State, which he says "are becoming depopulated owing to droughts"; thousands of children are growing up under semi-starvation, and he predicts that fifty years hence, when the minerals have been depleted, "the enormous debt of the country

will fall upon the shoulders of the impoverished sons of the soil, the Poor Whites will form the greater part of our population, and the country will be ruined." He attributes these changes to "a dwindling rainfall, a country becoming uninhabitable from droughts." Whether the Chobe Dam would directly improve the climate of the southern Free State and Cape Colony seems doubtful; but it might be of great benefit to the northern regions if there be adequate population to till the irrigable land. It is probable that some of the flood water which flows wasted down the Zambezi could be diverted westward into the now arid basins of Ngami-land; but the data are inadequate to show how far south its influence would extend. In the interests of the northern arid areas of the Union of South Africa, it is to be hoped that study of the problem will be continued to demonstrate the extent of the area which would benefit by Prof. Schwarz's ingenious scheme.

### Obituary.

PROF. W. JACK, LL.D., D.Sc.

PROF. WILLIAM JACK, whose death on March 20, at his residence, 5 St. John's Terrace, Hillhead, Glasgow, was announced in NATURE of March 29, was born at Stewarton, Ayrshire, on May 29, 1834. As a pupil in Irvine Academy he showed marked ability, and when he passed on to Glasgow University he confirmed the promise of his schooldays by taking a leading position in all the classes of the Faculty of Arts. In the Scottish Universities of that day there was little specialisation; all the students in the Arts Faculty followed the same curriculum and, as they usually entered the University comparatively young, the education they received formed a good foundation for the specialised studies of later life. For such more advanced studies, however, there was little direct provision in the University, and Jack, after graduating in Glasgow, proceeded to Cambridge, where he entered at Peterhouse. In the Tripos of 1859 he was fourth wrangler, but though he missed the coveted position of senior wrangler, he won the distinction of first place for the Smith's Prize. In 1860 he was elected a fellow of Peterhouse. The sound general training of the Arts curriculum in Glasgow, followed by the specialisation at Cambridge, was an admirable preparation for a varied and successful career.

In 1860 Jack was appointed one of Her Majesty's Inspectors of Schools in Scotland; in the south-west district to which he was assigned he won the esteem of the schoolmasters, and he is gratefully remembered by the small band of survivors. In 1866 he resigned the inspectorship to take up the duties of the chair of natural philosophy at Owens College, Manchester. There he took an active part not merely in the work of the College but in the general life of the community, and he was gratified by the recognition of his services on the occasion of the jubilee celebrations in 1902, when the Victoria University conferred on him the degree of D.Sc.

It might have seemed as if Prof. Jack had withdrawn from educational work when in 1870 he accepted the position of editor of the *Glasgow Herald*; yet it is unquestionable that one of the chief reasons that induced him

to accept that position was of a definitely educational kind. One of his main objects, as he told his staff, was to make the newspaper a "people's university," and in pursuance of this aim reviews of books received much more attention and the area of its news service was much extended. At the present day the *Glasgow Herald* holds a leading position for the quality of its literary articles. Jack continued as editor until 1876, when he became associated with the firm of Messrs. Macmillan and Co.

Prof. Jack's most notable services to the cause of education, however, were rendered during his occupancy of the chair of mathematics in the University of Glasgow, to which he was appointed in 1879. His accession was marked by a thorough reorganisation of the mathematical department. At the date of his election the curriculum for degrees in Arts made little provision for advanced study, the course of study was rather narrow, and too frequently the classes were overcrowded. While preserving the essential features of the recognised courses he greatly improved the efficiency of the teaching by well-designed subdivisions of the classes, introduced in certain cases the element of tutorial instruction, and, by the institution of higher courses, extended the range and raised the standard of the honours degree. A new spirit was awakened among the students, and showed itself not merely in the increased attendance on the advanced classes, but also in the importance attached to the work of the summer vacation. At that time there was no summer session in the Faculty of Arts, but under his direct encouragement, and with his substantial support, summer classes were formed for the study of branches of higher mathematics that could not be overtaken in the winter session, and these classes became a feature of the mathematical teaching. The great improvement of the position of mathematics in the schools and universities of Scotland that marked the closing years of last century was due in no small degree to Prof. Jack's labours.

Prof. Jack won the affection of his students. Even the dullest member of the junior class felt the influence of the genial nature that could not be curbed by the

formalism of abstract mathematics, and he cherished for his professor an affection that was not to be measured by his proficiency in algebra or his knowledge of Euclid.

The services of Prof. Jack in Senate and Court were highly valued by his colleagues, but they were also in demand outside his own University. He was an assistant commissioner on the Primary Education (Ireland) Commission of 1878, and he served on the Queen's Colleges (Ireland) Commission of 1882. His wide experience, sound judgment, and tactful manner were peculiarly fitted for the work of these Commissions.

In 1910, the year after his retirement, his numerous friends presented to the University his portrait, painted by Sir James Guthrie, P.R.S.A., together with the sum of 300*l.* for the institution of a prize, to be called the William Jack Prize, and to be awarded at intervals for the best thesis on a mathematical subject.

Prof. Jack married a daughter of Dr. J. P. Nichol, professor of astronomy, who predeceased him. He is survived by two sons, Dr. W. R. Jack and Prof. A. A. Jack, who holds the chair of English in the University of Aberdeen.

GEORGE A. GIBSON.

#### DR. L. PÉRINGUEY.

WE regret to announce the death of Dr. L. Péringuey, Director of the South African Museum, Cape Town, which occurred suddenly on February 20. Dr. Péringuey, who was French by birth, had been connected with the Museum since 1884, was Assistant Director under Mr. W. L. Sclater, and became Director in 1905. Throughout this long period he had worked untiringly for the advancement of science in South Africa and of the institution with which he was so closely connected. He was a man of varied scientific interests. His greatest work was the "Descriptive Catalogue of the South African Coleoptera." During the past twenty years he laboured unceasingly at the problem offered by the prehistoric inhabitants of Southern Africa, and his volume on "The Stone Age in South Africa" remains the standard work on this branch of anthropological research. Coupled with this, Dr. Péringuey made a close study of the physical characteristics of the fast-vanishing groups of Hottentots and Bushmen; and under his direction the Museum accumulated its unique collection of plaster casts of specimens of those races, taken directly from the living subjects, and of skulls and skeletal remains.

During Dr. Péringuey's directorship the increase that was made in the collection of material for study and exhibition in every branch of natural science was immense, considering the limited funds at his disposal. The volumes of the "Annals of the South African Museum" testify partly to this fact. At the time of his death, he was actively engaged on a more comprehensive treatment of the anthropological material at his command, and also in an amplification of his Catalogue of Coleoptera.

In addition to his arduous duties as Director of a fast-growing institution, which included an historical annexe known as the Koopmans de Wet Museum, Dr. Péringuey was a trustee of the Michaelis Art Gallery, and chairman of the National Botanic Gardens Advisory Committee. He was for many years an official of the South African Philosophical Society, and was the first general secretary of the Royal Society

of South Africa, for the incorporation of which by Royal Charter, he was an enthusiastic worker. He served as president of the Society from 1914 until 1918.

His death is a grievous loss to science, to South Africa, and to a large circle of friends and correspondents scattered over the world.

#### PROF. F. JEFFREY BELL.

THE death on April 1, following an accident, of Francis Jeffrey Bell, in his seventieth year, removes a familiar figure from the world of London zoologists and the rooms of the Athenæum. The eldest son of F. J. Bell of Calcutta, and a relation of Sir Charles Bell the anatomist, Bell entered Magdalen College, Oxford, in 1874, studied under Rolleston, and took honours in natural science in 1878. In that year he was appointed an assistant in the zoological department of the British Museum under Dr. Günther, a post which he held until his retirement in 1919. He was also professor of comparative anatomy at King's College, London, from 1879 to 1896, when he was made professor emeritus and a fellow of the College. In 1879 appeared his excellent translation of Gegenbaur's "Comparative Anatomy," still a valued work of reference, and in 1885 he published a "Manual of Comparative Anatomy and Physiology," which was in its time widely used by medical students.

At the British Museum, Bell had charge of the echinoderms and worms, and produced a long series of descriptive reports and papers chiefly on the former group; thus he described the echinoderms of the *Alert*, *Southern Cross*, and *Discovery* expeditions, and contributed to the reports of Herdman, Stanley Gardiner, Willey, and others. His "Catalogue of British Echinoderms in the British Museum" (1892) was of much service to British naturalists. His work was well arranged, his English was polished, his descriptions were neat; an occasional suggestion of deeper moment or a subtle phrase of sub-acid humour, marked his papers from the undistinguished crowd without disturbing their smooth rotundity of form. His exhibition gallery likewise was never overloaded, and its relatively few specimens were well displayed. One in whom the sense of "good form" was so strong made a useful editor for the Reports of the National Antarctic Expedition and for Bernard's Catalogue of Madreporaria. He edited the *Zoological Record* for a couple of years (1885-86), but was more at home in furnishing reviews to the *Athenæum* and abstracts to the Journal of the Royal Microscopical Society.

WE regret to announce the following deaths:

Sir Walter James Buchanan, K.C.I.E., formerly of the Indian Medical Service, editor of the *Indian Medical Gazette* for the period 1899-1919, on March 22, aged sixty-two.

Prof. August Ewald, professor of physiology in the University of Heidelberg, aged seventy-five.

Prof. C. Godfrey, late Headmaster of the Royal Naval College, Osborne, on April 4, aged fifty.

Prof. Gabriel Siegmund, for many years director of the Organic Department of the Chemical Institute of the University of Berlin, on March 22, aged seventy-two.

Prof. J. E. B. Warming, emeritus professor of botany in the University of Copenhagen, on April 1, aged eighty-three.