

represented here by very handsome species, *P. stricta* and *H. virgata*. These two species differ from most of those in the Park, in that their leaves are not sclerophyllous. The vegetation does not nearly form a complete cover on the sandhills, but it is sufficient to prevent wind erosion.

As in deserts in other parts of the world, this area bears a large number of minute annuals with a very short life-cycle. The number of these species in Wyperfeld will probably be found to be very large. The family Compositæ is particularly well represented. *Toranthus Muelleri*, *Brachycome pachyptera* and *Gnaphalodes uliginosum* are all extremely minute annuals found in the Park. Most of these species spend a dry season as seeds and pass through their short life-cycles soon after periods of heavy rain, and they are consequently easily missed by investigators of the flora.

#### GEOLOGICAL CHARACTERISTICS

By Dr. E. S. Hills, University of Melbourne

The rocks of the Mallee are marine, estuarine, fluvial and lacustrine sediments laid down in and near the margins of a former marine gulf during Cainozoic times. This marine bight, which has been named the Murray Gulf, came into existence in Oligocene times, and from then on to the end of the Pleistocene it was gradually filled with clays, limestones, marls and sands. The thickness of these ranges up to a total of more than 2,000 ft. and they rest upon a depressed basement of older rocks, chiefly Palæozoic granites, schists, sandstones and conglomerates, which have been

penetrated in bores. The limestones, which are of Miocene age, are overlain by impervious clays in the Mallee, and are important aquifers for artesian and subartesian water.

The superficial deposits are sands, gypsum and local freshwater ostracodal limestones, of fluvial and lacustrine origin. The sandy soils derived from these deposits have been heaped by the wind into long regular sand ridges, trending east-west, with areas of irregularly arranged 'Jumbled' sandhills in places. In their virgin state, these sand ridges are fixed by a cover of vegetation, but where this has been cleared, extensive sand drift has since taken place. There is evidence that the regular sand ridges, which have been formed under the action of the dominant westerly and north-westerly winds, have grown in stages. Buried soil horizons of 'travertine' limestone indicate that periods of relatively high rainfall have alternated with drier periods. The present (or immediate past) time appears to be a relatively wet period.

Apart from the minor undulations due to the sand ridges, the surface of the Mallee exhibits broad ridges and troughs, some miles in width, the trend of which varies from north to north-west. These are of tectonic origin, reflecting buried faults or warps in the underlying basement complex. Uplift across the lower course of the Murray resulted in the formation of lakes, which have now been drained, and in these and other old lake basins extensive deposits of gypsum, locally known as copri, were laid down. These now constitute an important source of this mineral.

## OBITUARIES

Dr. W. J. Mayo

TO the surgeon, and especially to the surgeon in the United States of America, the death of Dr. W. J. Mayo on July 28 at the age of seventy-eight years is a major historical event. Born in 1861, in the State of Minnesota, he spent his life and did his work in the small country town of Rochester; and there with his brother Charles, who died two months ago (see NATURE of July 15, p. 103), he built up the Mayo Clinic the expansion of which has been very great. In early life he conceived the idea that patients could best be treated by groups of medical men among whom could be found specialists in every disorder. This idea was revolutionary at the time; and although in operation it may best be suited to American conditions, not only did it underly the practical success of the Mayo Clinic, but it has also influenced wider opinion because medical men from all over the world were attracted to the experiment. In Rochester was to be found an

organization almost fanatically devoted to the interest of the patient, to the exclusion both of financial considerations and of personal professional renown. For from the beginning of the clinic part of its profits were set aside to be devoted to research not only in clinical subjects and the fundamental clinical sciences, but also in such related sciences as chemistry and physics. The two brothers and their early collaborators deliberately sacrificed wealth; and chose to regard as their reward the knowledge that their Institution was making substantial contributions to medical progress. As funds accumulated they were to expand their efforts, always governed by the same general principles, to postgraduate education; and their system of training young men broadly and encouraging specialization only after a sound basic experience has been watched with interest by the medical academic world, and has frequently been utilized by medical schools both in America and in Europe; for one of the many

excellences of the clinic has been its readiness to expound its technical methods and the results obtained by them to visitors of any nationality. There is no doubt that the inception and later the guidance of this great experiment in group practice were controlled by Dr. Mayo; and the success which has attended his aims stamps him as a man of singular vision, broad outlook, indomitable perseverance, possessed of administrative powers of the highest order.

In the practice of his craft, Dr. Mayo was in the first rank. His personality and sincerity at once gained and ever afterwards retained the confidence of his patients; as an operator he could be cautious or bold as the occasion demanded, and with his enormous experience and thought for individual patients those who worked with him came to rely implicitly on his surgical judgment. His chief interests lay in the surgery of the alimentary and biliary tracts, and to these he made many substantial contributions. He was sedulous in promoting the advancement of surgery in the United States, and to this end interested himself actively in the founding and governing of the American College of Surgeons and the American Surgical Association. This disinterested devotion to surgery was honoured by learned bodies all over the world.

As must men whose energies are devoted to the control of great enterprises, he kept himself somewhat apart. But he was a warmhearted and generous helper of his juniors, for he knew better than most, and lived to see himself right, that to justify his conceptions the organization which he built almost with his own hands must live on after he relinquished active control.

J. R. LEARMONTH.

#### Prof. R. W. Reid

PROF. ROBERT W. REID, emeritus regius professor of anatomy in the University of Aberdeen, the Nestor among British anatomists, died in Aberdeen on July 28, aged eighty-eight years. He was born in the manse of Auchindoir, Aberdeenshire, in 1851, and after graduating in medicine in the University of Aberdeen, became demonstrator of anatomy in St. Thomas's Hospital, London, in 1873, being almost the first medical man to be attached to a London hospital as anatomist. In 1889, he succeeded Sir John Struthers as professor of anatomy in the University of Aberdeen. He held this chair for thirty-six years, retiring in 1925.

Reid was the sole survivor of the anatomists who founded the Anatomical Society in 1887; he became president of the Society in 1910. He was elected a fellow of the Royal Anthropological Institute in 1886. His first important contribution to anatomy was entitled "Observations on the Relation of the Principal Fissures and Convolutions of the Cerebrum to the Outer Surface of the Scalp"; this appeared in the *Lancet* of September 27, 1884, and it contains a description of a base line—spoken of to-day as "Reid's Base Line". Two other important papers on topographical anatomy were published by him in the *Journal of Anatomy*—one on the relationship

of nerve roots to vertebral markings; the other on the position of the chief nerve trunks.

Soon after being appointed to Aberdeen, he established in connexion with his department an anthropological bureau to register the physical characters of the students who entered and to keep a record of their growth changes. Reports from the valuable data thus collected have appeared in the *Journal of the Royal Anthropological Institute*. Records are still being kept, and no doubt will provide the material for further papers dealing with the anthropology of the Scottish student. Another great service he rendered to the prehistory of Scotland by the preservation and study of the remains of the strange people who first appeared in Aberdeenshire early in the second millennium B.C. His own physical features were so similar to theirs that one had reason to regard him as a descendant of these early Bronze Age settlers in the north-east part of Scotland. The Anthropological Museum of the University of Aberdeen, in which these unique specimens are preserved, owes more to Prof. Reid than the "Illustrated Catalogue of Specimens from Prehistoric Interments found in the North East of Scotland" which he wrote in 1924. In acknowledgment of what he did for this Museum and for the University, his friends and pupils endowed a lectureship in connexion with it—known as the Reid Lectureship. He was the moving spirit and the purse-bearer—that brought into existence the Anatomical and Anthropological Society of the University of Aberdeen. In person he was retiring, almost morbidly modest, charitable and very hospitable.

#### Dr. W. A. Potts

I.R. WILLIAM ALEXANDER POTTS, who died on July 23 in Birmingham at the age of seventy-three years, was a familiar figure to those interested in psychological medicine and latterly also to those interested in criminology.

Potts started his scientific career at the East Riding Mental Hospital, Beverley, but left this branch of work to go into general practice, where he remained for fully twenty years. After this he became medical adviser to the Birmingham Mental Deficiency Committee and so his more scientific side became concentrated on the mentally defective. Since 1919 he had been very helpful in an advisory capacity to the police courts in Birmingham, particularly when they were dealing with cases of mental deficiency. He was also medical adviser to the Barr Park Colony and consultant to the Royal Albert Institution. He was chairman of the Special Schools After-Care Committee in Birmingham. He carried out a considerable amount of work lecturing and teaching, and collaborated with Shuttleworth in his "Mentally Deficient Children".

He was a most charming personality and always had a ready smile and a helping hand for the young men.

WE regret to announce the death of Mr. H. P. Hollis, a former president of the British Astronomical Association, on August 7, aged eighty-one years.