

## PROF. FRANKLIN P. MALL.

ALL who are interested in the progress of biology will learn with deep regret of the sudden death of Dr. Franklin P. Mall, of Johns Hopkins University, at the age of fifty-five. It was chiefly owing to his precepts and example that, in little more than a score of years, a complete revolution was wrought in the anatomical departments attached to medical schools throughout the length and breadth of the United States. Dissecting-rooms were changed from places in which routine teaching and perfunctory investigation were carried on to laboratories where exact methods were applied to the elucidation of definite problems. Prof. Mall was thirty-one years of age when he returned in 1893 from a long course of study under the late Prof. His, of Leipzig, to become the first professor of anatomy in Johns Hopkins University, Baltimore. He designed his own department, selecting a slimly built, cheap, brick construction, and settled down with his students to combine study with research. He devoted himself to embryological and microscopic investigations, reconstructing his results in the exact model methods practised by Prof. His. His writings cover the whole field of embryology, every contribution representing a permanent addition to knowledge. His pupils left him to fill the various chairs of anatomy as they fell vacant, and carried to their new departments the methods and spirit they had imbibed from Franklin Mall. He took a leading part in the foundation of the excellent journals which have been established in the United States for the publication of anatomical investigations—the *American Journal of Anatomy*, the *Anatomical Record*, and the *Journal of Morphology*. He pursued the study of human embryology in a more systematic manner than has ever been accomplished by any other man.

Prof. Mall began to collect embryos in the earlier months of development when he settled in Baltimore, and continued year by year to preserve, register, and photograph them; they were cut into serial sections, examined, reconstructed, and methodically stored, so that student after student could use the same sections for researches of quite different kinds. By 1913 his collection of embryos numbered more than 1000, many of them showing early stages of diseases and malformations. When he succeeded in persuading the Carnegie Institution of Washington to establish a National Department of Embryology, he handed over to it the whole of his embryological collection and accepted the post of director of the department. The names of the workers he enlisted in the service of the department, and the great scientific value of the "Contributions to Embryology," issued by the Carnegie Institution, are ample evidence of the success of his last piece of statesmanship.

Prof. Mall was a quiet, kind, and charming man, who had set himself a public-spirited but arduous task, and he lived long enough to see it well begun and to leave behind a band of pupils who are willing and able to carry it on.

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## NOTES.

PROF. A. G. NATHORST, of Stockholm, having on November 7 last reached sixty-seven years of age, has, in accordance with Swedish laws, retired from his appointment as keeper of the palæobotanical department of the Swedish State Museum of Natural History (Naturhistoriska Riksmuseet). His successor has not yet been appointed.

THE efforts of Sir Harcourt Butler in developing the mineral resources of Burma have been successful. There are prospects, says the *Pioneer Mail* of November 3, that the production of wolfram in Tavoy will soon be largely increased. One or two mines which until recently were cut off from communications are now being developed, and promise an outturn of 30 to 40 tons per month. Some rich new finds have been made in old blocks, and with the new road to the Pe Valley belt, extensions of present roads, and rumours of the promotion of new companies in England, the prospects of the industry have much improved.

THE council of the National Museum of Wales is devoting special attention to the insect collections. Six thousand specimens, of which a large proportion are Welsh examples, have been classified. Experiments as to the best methods of mounting and preserving small-winged insects and larvæ are being carried out. There are still, however, several groups almost unrepresented, and an appeal is made to collectors to add any specimens of interest, so that Welsh entomology may be adequately represented.

Two pamphlets on the Channel Tunnel have reached us—one by Mr. Arthur Fell, chairman of the House of Commons Committee on the question, the other by Sir Francis Fox. Mr. Fell strongly criticises the Government for refusing to allow any preliminary steps to be taken by the Channel Tunnel Company. He not only dwells on the economic and military value of the tunnel, but also emphasises the political aspect of the problem. Sir Francis Fox's pamphlet is a reprint from the *Geographical Journal*. It deals with the engineering aspects of the tunnel. The tunnel is designed to keep within the grey chalk, except near the two coasts, where for a short distance it passes through the gault. The depth below the sea-bed is to be a minimum of 100 ft. The tunnel will consist of two tubes, each 18 ft. in diameter, with cross-tunnels every 200 yards. It is proposed to form a "water lock," a dip in the tubes, which could, in case of emergency, be filled with water for the length of a mile. The water would not injure the tunnel works, and it could be pumped out only by the machinery at the power station in Kent. Trains could run between London and Paris via the Channel Tunnel in six hours.

WHEN a person feels that the air of a room is dry and oppressive the feeling is generally explained as due to the relative humidity or fraction of saturation of the air being low. The erroneous character of this explanation was pointed out two years ago by Dr. Leonard Hill and his colleagues of the Medical Research Committee in a communication to the Royal Society. They ascribe our sensation to the rate of loss of heat from the skin by evaporation, and have constructed a thermometer with a large bulb covered with moist fabric to measure this rate of loss under different conditions as to temperature, saturation, and speed of motion of the air, the bulb being kept at about the temperature of the human body. The agreement between the instrument and the "feel" of the air is found to be fairly