

and it would seem that this gave physics an added attraction to his students. Evidence of his ingenuity in this direction is apparent in his books.

In 1898 he wrote his first text-book, on "Magnetism and Electricity for Beginners". This was the first of several text-books produced in association with Sir Richard Gregory, which are known to generations of physics students. Much of his time thenceforward was devoted to the preparation of these books, while he still continued his teaching, from which he only recently retired after a period of more than fifty years. He maintained his interest in his books to the end, devoting much care to keeping them abreast of modern developments.

Mr. Hadley had a charming personality, and he was regarded with affection by those who benefited from his instruction. W. S. TUCKER

WE regret to announce the following deaths :

Mr. Will Hay, well known as an actor and also a distinguished amateur astronomer, on April 18, aged sixty.

Mr. R. A. Todd, a Ministry of Agriculture and Fisheries inspector and formerly a member of the staff of the Plymouth Laboratory of the Marine Biological Association of the United Kingdom.

## NEWS and VIEWS

### Meldola Medal for 1948 : Dr. R. A. Raphael

ON the recommendation of the Council of the Royal Institute of Chemistry, the Society of Macchemists has awarded the Meldola Medal for 1948 to Dr. Ralph Alexander Raphael, in recognition of the contributions he has made to the investigation of new methods of approach to the synthesis of natural compounds. Dr. Raphael graduated in 1941 from the Imperial College of Science and Technology with first-class honours in chemistry, and in 1943 was awarded a Ph.D. for work on acetylenic compounds. During 1943-46 he was head of one of the chemotherapeutic research departments of Messrs. May and Baker, Ltd., and was mainly concerned with penicillin chemistry. He was then awarded an Imperial Chemical Industries fellowship and resumed research work at the Imperial College on the investigation of the potentialities of acetylenic compounds in the synthesis of natural products. In 1947 this work resulted in the total synthesis of the penicillic acid, thus proving its structure beyond doubt. Attention was then turned to the utilization of the peculiar properties of acetylenic compounds to accomplish the synthesis of carbohydrates and their derivatives, and, up to the present, arabitol, ribitol, erythritol, threitol and erythrose have been obtained. A study is also being made of methods of producing long-chain aliphatic acids of various types. Concurrently, Dr. Raphael is also investigating synthetic routes to compounds containing the vitamin D triene system. He has recently been appointed lecturer in organic chemistry in the University of Glasgow.

### Avenue of Human-headed Sphinxes at Luxor

IT has long been known that the avenue of ram-headed sphinxes of Amenophis III which extends southwards from the Temple of Khons at Karnak is the northern end of a processional way once linking the Temple of Karnak with the Temple of Luxor about one and a half miles to the south. On the line of this avenue, Zakaria Effendi Ghoneim, chief inspector of antiquities for Upper Egypt, has recently found a further series of human-headed sphinxes erected by either Nectanebo I or II about a thousand years later, in the late fourth century B.C. The main interest of the new discovery appears to lie, for the moment at least, in the inscriptions on the base of each sphinx. The text records that Nectanebo had "made this road for Amun so that he might make good navigation from Luxor". The god Amun was normally resident at Karnak. The principal occasion

on which he visited Luxor was during the annual festival of Opet, when he was conveyed by river from Karnak to Luxor and the whole city was given over to festivity for many days. The new texts, therefore, either hint that by the end of the Pharaonic period the river journey of Amun during the Feast of Opet had been replaced by a progress by land, or they refer to a new or unidentified Theban feast. As the clearance and excavations round the Temple of Luxor progress, there is every reason to expect that new discoveries will be made, and that fresh light will be thrown on the early history of Thebes. 50

### Additional Remains of *Australopithecus* in South Africa

FURTHER discoveries of the remains of the fossil *Australopithecinae* of South Africa are now reported from a new site, Makapansgat, almost 250 miles north of Sterfontein, where Dr. R. Broom found numbers of skulls and portions of the limb skeleton during 1947 and 1948. Two of the Makapansgat specimens, which have already been described by Prof. R. Dart in the *American Journal of Physical Anthropology* (6, 259 and 391; 1948) and referred by him to a new species, *A. prometheus*, consist of an occipital bone and an immature mandible. These provide additional confirmation of the inferences based on the earlier material that the *Australopithecinae* show in certain anatomical features a remarkable approximation to those hitherto regarded as distinctive of the *Hominidae*. For example, the disposition and extent of the nuchal crest and muscular markings on the occipital bone conform to the human rather than the simian type. The perfectly preserved and unworn anterior premolar in the immature mandible is bicuspid with the cusps of approximately equal height as in man, and thus differs markedly from the characteristic sectorial form of the lower anterior premolar in the anthropoid apes. Still more recently, there have been found at the same site a considerable part of the facial skeleton, a parietal bone, and the iliac portion of a pelvis. According to unpublished reports, the ilium, like the specimen already described by Broom (*Nature*, 160, 430; 1947), is closely similar in shape and proportions to a human ilium, and thus contrasts strongly with that of apes.

### Science Museum London

DEMOLITION of the old portion of the Science Museum, London, known as the Southern Galleries,