the thalamic and pulvinar structures, for these can not only affect speech but also old motor skills. This is particularly seen in deep wounds of the left posterior parietal region, which are followed by apraxia of both the right and left limbs. Current hypotheses on memory mechanisms are discussed, and the possibility is raised that the preservation of old memories is not a matter of static storage, but of the continual spontaneous activity of the neurones.

This monograph will be of interest to all concerned with language functions. It is well written, but in proportion to the amount of space devoted to individual case histories, the final chapter summarizing the observations and propounding the author's conclusions is somewhat brief.

MURRAY A. FALCONER.

Phosphorus Metabolism of the Brain. By P. J. HEALD. Pergamon Press, 1960. Pp. 195. price 42s.

This is a critical assessment of the collected work on phosphorus metabolism in the brain up to January 1959 and divides naturally into *in vitro* and *in vivo* studies followed by a section on analytical methods. The book is written primarily for biochemists interested in this field and not for clinicians. However, there is a short chapter entitled "General Comments" which gives a good general survey of the subject and the difficulties involved in the *in vivo* study of phosphorus metabolism including those using radioactive tracer techniques.

The Hypothalamus of the Cat. By RUTH BLEIER. The Johns Hopkins Press, Baltimore, 1961. Pp. 109. Price £6.

The hypothalamus is a region of the brain which, at the present time, is yielding amazingly rich rewards to the experimental worker. The importance of this small and ancient part of the brain, with cerebral connexions which are so widespread, is still insufficiently realized by many psychiatrists. It is forgotten that messages, nervous or humoral, continually leave this advanced headquarters to direct the activity of the greater part of the endocrine and other glands of the body. Probably there are many patients suffering from a mild degree of Simmonds' disease resulting from a head injury which has damaged the pathways from the hypothalamus. Unfortunately as yet remarkably little work has been done on the pathology of the hypothalamus in human cases, but this reviewer believes that when proper studies are made much valuable information will be obtained.

Meanwhile, experimental work can only progress when aided by first rate atlases like Dr. Bleier's. This volume is to the experimentalist what the Pilot's Guide to the English Channel is to the navigator—indispensable. It will take its place with the great classic atlases such as those of Winckler and Potter, and of Clarke and Horsley. It is beautifully produced and the illustrations are clearly marked and a joy to use.

For the real enthusiast there is a small subsection on the hypothalamus of the lion and the tiger, but this reviewer feels that he will use this section rather less than he will use the rest of the atlas.

This splendid book should be on the shelves of all those interested in the hypothalamus and both author and publishers are to be congratulated on producing an extremely useful and beautiful book.

PETER DANIEL.

The Nature of Sleep. A Ciba Foundation Symposium. Edited by G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., M.R.C.P., and MAEVE O'CONNOR, B.A. London: J. & A. Churchill, 1961. Pp. 416. Price 50s.

Considering the large number of years we all spend asleep during our lives and considering, too, how frequently we are faced with clinical disturbance of sleep, remarkably little is known about the phenomenon. The organizers of this symposium are to be congratulated on their choice of subject and upon the speed and skill with which the material has been put before the public.