His observations agree with the theory of Dandy that the seat of consciousness is located somewhere near the midline, between the limits set by the corpus callosum and the basal structures of the brain. G. W. T. H. FLEMING.

The Effect of Short Waves on the Cerebral and Radial Pulses [Azione delle onde corte sul polso cerebrale e radiale]. (*Il Cervello, vol. xvii, p.* 1, *Jan.*, 1938.) *Ricci, A.*

A series of experiments were undertaken to show that a reduction in amplitude occurred in the pulse after exposure to ultra-short waves. This was accompanied by mental changes in the direction of impairment of orientation. Schoolboys and homing pigeons were the objects of experiment. In the case of the latter the irradiated birds flew round and round erratically, as though lost, before setting out in their correct directions. The unaffected birds, on the other hand, circled three or four times, as is usual, and then set off deliberately. H. W. EDDISON.

Somatic Motor and Sensory Representation in the Cerebral Cortex of Man as Studied by Electrical Stimulation. (*Brain, vol. lx, p.* 389, *Dec.*, 1937.) *Penfield, W., and Boldrey, E.*

The authors report their work on localization in 163 patients, in each of whom they had carried out electrical exploration of the cerebral cortex under local anæsthesia. They found no evidence of extension of the motor cortex to areas 6 $a\beta$, 5 and 22 as described by Foerster. Somatic motor responses were obtained from the Rolandic cortex, both pre- and post-central, but not from other areas if subconvulsant stimulation was used. Turning of the head and neck to the opposite side was not obtained under normal conditions outside of the Rolandic cortex. This adversive head-turning is produced occasionally from the lower end of the precentral gyrus, while conjugate contralateral deviation of the eyes may be produced by stimulation in the vicinity of area 8 α, β and δ, in and just anterior to the precentral gyrus.

The motor cortex in its broadest sense includes areas 4, 6 α β, 3, 1 and 2. Area 8 α, β, δ probably should be added, as conjugate deviation of the eyes appears to extend forwards over this general region.

Cortical representation of somatic sensation in addition to being found in the postcentral convolution is also found in Areas 4 and 6 $\alpha\beta$ of the precentral gyrus.

Both motor and sensory points appear to be constant for any one individual, but there is great variation in the topographical position of each point from patient to patient. G. W. T. H. FLEMING.

The Thalamus and Emotion. (*Psychol. Rev., vol. lv, p.* 42, *Jan.*, 1938.) *Lashley, K. S.*

The writer summarizes the evidence produced by various contributors to the theory that the thalamus is connected in some way with emotion.

He points out that the thalamus contains centres in which some at least of the patterns of expressive movement are integrated, but these are only motor centres. He does not consider that the thalamus adds the affective or emotional character to sensations. The affective changes resulting from thalamic lesions are restricted to a small group of somæsthetic sensations, and cannot be interpreted as a general change of affectivity. The effects of thalamic lesions are primarily in the character of the sensations, in intensity, duration and localization.

The only part of the thalamic theory of emotion which has factual support is the localization of motor centres for emotional expression within the hypothalamus. These motor centres do not contribute directly to other aspects of emotion, and there is no evidence for the existence of other affective or emotional centres.

G. W. T. H. FLEMING.