groups, the motor nuclei and the sensory and correlation centers, of which the latter are richer than the former. Though the richest motor region (ventral cornu) is but little poorer than the poorest sensory one (spinal V nucleus), the two groups do not overlap in the case of those regions studied, except in a few individuals. The substantia gelatinosa Rolandi of the spinal cord is the only part which does not conform with this statement; (4) the richest of the centers observed is the dorsal cochlear nucleus which is more than half as rich again as the ventral cornu, about two and a half times as rich as the substantia gelatinosa Rolandi (the poorest gray region), and eight times as rich as the fasciculus cuneatus; (5) great individual variations occur, and the two sexes do not seem to show any constant difference. [Leonard J. Kidd, London, England.]

Abt, T. A., and Tumpeer, I. H. SIGNIFICANCE OF XANTHOCHROMIA OF CEREBROSPINAL FLUID. [Am. Jl. of Dis. of Child., September, 1920.]

Canthochromia occurred in an infant of eight months who lived thirty-seven days. There was marked internal hydrocephalus, pyelitis and bronchopneumonia. The yellow C. S. F. was attributed to a meningoencephalitis with subpial hemorrhage.

Coupin, F. ABSENCE OF THE FORAMINA OF MAGENDIE AND OF LUSCHKA IN SOME MAMMALS. [Compt. rend. Soc. de Biol., 1920, LXXXIII, June 26, p. 954 (4 figs.).]

The existence of the median foramen of Magendie and of the lateral foramina of Luschka in man has been denied by some anatomists. Coupin has examined mice, rats, guinea pigs and young cats and rabbits. He regards the conclusions drawn from the method of colored injections on living animals as unreliable, and also those made postmortem; the roof of the fourth ventricle is very fragile, so that one cannot exclude the possibility of its rupture by the injected fluid. So he has used dissections and necroscopical sections. If care be taken to avoid traction on bulb and cerebellum, one sees complete continuity of the ventricular roof, and there is no visible perforation in the calamus scriptorius region. Study of serial sections shows also absence of Luschka's foramina; in the lateral recess of the bulb the epithelium of the choroid plexus is seen to be continuous with the ependymal epithelium. Thus, the fourth ventricle is everywhere limited by an epithelium, and these co-called foramina are artefacts. In all the mammals studied Coupin finds that there is no direct communication between the ventricular cavity and the subarachnoid spaces. [Leonard J. Kidd, London, England.]

del Río-Hortega, P. TRANSFORMATION OF THE MICROGLIA. [Arch. de Neurobiologia, June, 1920.]

This well illustrated study of the normal and pathologic microglia showing the transformation of the branched glia cells into long drawn