

interrupted by a short bridging convolution. When prolonged into a fissure it joined that which lay next to the marginal convolution or the 1st curved fissure. But this was not necessarily morphologically the same in all these brains. Where four tiers of convolutions were differentiated, it was, of course, the mediolateral fissure, but when only three tiers were differentiated, then it probably represented the lateral fissure, as in these brains both the mediolateral fissure and convolution were either absent or only imperfectly differentiated. The coronal fissure formed the outer boundary of the sigmoid gyrus. The coronal gyrus was the anterior part of the 2nd external convolution, which in those brains that possessed four tiers of convolutions was the mediolateral convolution; but, when only three tiers were present, it was most probably represented by the suprasylvian convolution.

The crucial fissure varied materially in its position in the genera of the Carnivora and Pinnipedia. In the Seals and Walrus it was so far forward as not to be seen on the dorsum of the hemispheres, but only at the anterior end of the cerebrum. In the Cat and Tiger it was visible in about the anterior fourth of the dorsum of the hemispheres; in the Dog, Weasel, Ferret, and Coati at about the junction of the middle and anterior third; in the Badger, Polar Bear, and Ratel it was even further back, so as to be just in front of a line dividing the dorsum of the hemispheres into an anterior and a posterior half. This variation in the position of the fissure necessarily affected that of the sigmoid gyrus which bounded it in front, behind, and on the outer side, and in those brains in which the fissure was elongated and far back, this gyrus formed a well-marked convolution on the dorsum of each hemisphere. When the crucial fissure was elongated both it and the sigmoid gyrus were continued downwards on the outer surface of the hemisphere,¹ and the direction of the coronal fissure, which formed the outer boundary of the sigmoid gyrus, was from below obliquely upwards and backwards.

It will now be of interest to compare the convolutions of the cerebrum in the Carnivora and Pinnipedia with those in Man and Apes, with the view of endeavouring to ascertain if any correspondence in their arrangement exists, and to what extent, in these orders of Mammals. The importance of instituting this comparison has already, indeed, presented itself to several anatomists, and various attempts have been made to harmonize the arrangement of the convolutions of the Carnivora with those of Man and Apes. The desirability of arriving at some definite conclusion on this matter is owing both to the interest of the subject from a purely morphological point of view, and to its physiological value in connection with the numerous experiments which have of late years been made for the determination of the functions of the cerebral cortex.

It will be obvious, if in the brains of these different orders one or two leading fissures

¹ The anterior limb of the sigmoid gyrus is sometimes called *gyrus præcruciatuſ* (*præfrontalis*), the posterior limb *gyrus postcruciatuſ* (*postfrontalis*).