

from the figures published by Tiedemann and Leuret. The crucial fissure was at the anterior end of the hemisphere, and about 14 mm. in its transverse diameter, and had the usual relation to the sigmoid gyrus, with which the sagittal convolution was continuous. No præcruciate fissure could be seen on the cranial surface of the cerebrum, but, when the hemispheres were separated from each other, a short fissure was recognised passing downwards from the crucial fissure, which apparently was the præcruciate fissure, whilst the short convolution which it differentiated represented the ursine lozenge, situated as Mivart has stated entirely on the mesial surface of the hemisphere. The prorean convolution was continued into the gyrus rectus.<sup>1</sup>

The convolutions and sulci on the inner and tentorial surface of the hemisphere of *Macrorhinus* corresponded in essential particulars with those of *Phoca*. Some differences are, however, to be noted. Thus in *Macrorhinus* the splenial fissure was not continuous with the postrhinal fissure, neither was it bridged across superficially by a retrolimbic pli-de-passage, though there was a short gyrus projecting backwards from the hippocampal convolution which may represent it. In both hemispheres the splenial fissure was continued into the crucial fissure; the demarcation of the splenial from the sagittal convolution by a continuous antero-posterior suprasplenial fissure was less marked in *Macrorhinus* than in *Phoca*.

In the Walrus, also, the splenial and postrhinal fissures were not continuous with each other. In one brain (*a*) (Pl. IX. fig. 3) there was no retrolimbic bridging convolution, which was present however in both hemispheres of another specimen, and in one of these hemispheres was represented by two convolutions. In two brains the splenial fissure joined anteriorly the crucial fissure. The definition of the suprasplenial convolution and fissure varied in opposite hemispheres. Both brains possessed postero-horizontal and postsplenial fissures and a splenial convolution. The olfactory peduncle and bulb were larger than in the Phocidæ.

In *Otaria jubata*, if I may judge from Dr. Murie's drawings of the brain of that animal, the postrhinal and splenial fissures were not continuous with each other; the splenial fissure was bridged by a retrolimbic convolution; the splenial fissure was not prolonged directly into the crucial fissure; the suprasplenial convolution and fissure were not sharply differentiated; the olfactory apparatus was more like in size the same parts in the Walrus than in the Phocidæ.

Dr. St. George Mivart has recently introduced into the study of the brain in the Carnivora and Pinnipedia the consideration of the area which he has named the Ursine lozenge, and has pointed out that it constitutes a well-marked feature in the anterior part of the dorsal surface of the cerebrum of *Otaria gillespii*. I have already stated that, in both *Phoca* and *Macrorhinus*, but especially in the former, this area is rudimentary, and concealed in the mesial fissure of the cerebrum. In the Walrus, again, the single con-

<sup>1</sup> Theodor's essay on the brain of *Phoca vitulina* did not come into my hands until after this Report was in proof.