THE ANATOMY OF THE BRAIN: A MANUAL FOR STUDENTS AND PRACTITIONERS OF MEDICINE

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THE BRAIN OF THE SHEEP (OVIS ARIES) BEING SELECTED FOR DESCRIPTION AND ILLUSTRATION BECAUSE OF ITS AVAILABILITY AND ITS PRACTICAL IDENTITY WITH THE HUMAN BRAIN FOR LABORATORY USE.

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With an Introduction by
PROF. HENRY H. DONALDSON

WITH FORTY FULL PAGE PLATES (SIX OF THEM COLORED) FROM ORIGINAL DRAWINGS BY THE AUTHOR.

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LIST OF ILLUSTRATIONS.

PREFACE.

It may seem an unwarranted liberty to ask the student to add this little volume to his already overcrowded library, but after the contents have been carefully examined, I trust the intrusion will be pardoned.

I feel, as I think all teachers of anatomy do, that the teaching of the architecture of the human brain has been a failure for the average medical student, not because of a want of many very admirable works on the subject, both descriptive and practical, but on account of the great scarcity of appropriate laboratory material, or perhaps the proper appreciation of the material ready at hand. That neurology can be intelligently taught by any other than the laboratory method, no teacher has the hardihood to affirm.

In looking up the matter of anatomical material suitable for the present requirements of laboratory work in neurology, the sheep (*ovis aries*) was found to offer an inexhaustible supply, and a source easily reached. This material can be procured as fresh as need be, and at a cost quite within the reach of any institution or individual.

Its adaptability for the teaching of the anatomy of the brain to the medical student was ascertained by the dissection of a number of sheep brains, and by writing an outline of description as a guide to the student for laboratory work. This outline was mimeographed and each student was supplied with a copy and with three sheep brains, two of which were removed while the third was left in the brain case. The student then worked out each dissection as outlined and made drawings of his preparations. The experiment was an unqualified success, and removed all apprehension, so far as the neurological laboratory was concerned, in the matter of working material.

At the suggestion of Professor Donaldson of the University of Chicago, I undertook the elaboration of my first description, and the result is contained in the following pages.

This small effort is of necessity very imperfect, as little literature is available for reference; but the writer trusts that it may assist in some measure those who, like himself, are compelled to conduct a course on the brain, and who are in need of material or a laboratory guide.

The Basel association nomenclature (BNA) has been followed as closely as possible. The association name, where it is thought necessary, is followed by the common or popular names in parenthesis; this facilitates the consultation of other works on the subject.

For a like reason the following terms are employed:

CEPHALAD (anterior or toward the head).

CAUDAD (posterior or toward the tail).

VENTRAD (ventral or toward the under parts).

DORSAD (dorsal or toward the upper).

MEDIAD (median or toward the middle line) and

LATERAD (lateral or toward the side).

The terms ventral, dorsal, etc., are used as being more in conformity with the spirit of the "BNA" than the terms anterior, posterior, superior and inferior.

The drawings, with the exception of plates I and II, which are photographs, are the work of the author; they were made from dissections, and unless otherwise indicated represent the actual size of the structures under consideration.

Perhaps the only inconsistency in the work is the subdivision of the substantia alba and the substantia grisea of the medulla spinalis (spinal cord) into tracts and columns somewhat after the manner in which Toldt arranges them in the human medulla spinalis; and, furthermore, this arrangement is illustrated by means of an histological preparation, a departure from the original idea of the work that could not well be obviated. Histology, pathology and embryology may prove this arrangement to be at variance with the truth, but until such evidence is forthcoming, the description here given will be helpful.

The close correspondence between the encephalon of the sheep, and that of man, is a powerful argument in favor of a like correspondence obtaining in the medullae spinales