The Warren Anatomical Museum of the Harvard Medical School and the arrangement of its collection / by William F. Whitney.

THE WARREN ANATOMICAL MUSEUM

OF THE

HARVARD MEDICAL SCHOOL

AND THE

ARRANGEMENT OF ITS COLLECTION.

BY

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1911.

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When Dr. John C. Warren was a student in London in 1799 and 1800, he made a number of anatomical preparations, which he brought with him on his return to this country. These formed the nucleus of a collection to which he added continually during the fifty years of his active life as a teacher and practitioner. It reached a large size and attracted the attention of students and physicians from all parts of the country.

On the completion of the Medical School Building, on North Grove Street, he presented this collection, with a fund for its maintenance, to the School. It was accepted by the Corporation on Dec. 27, 1847, and in their vote of thanks it was stated that "the collection of Anatomical preparations now presented by Dr. Warren to the President and Fellows, be known and designated as the Warren Anatomical Museum."

In accordance with Dr. Warren's expressed wish his skeleton has been preserved in the Museum.

Since then the collection has followed the fortunes of the School, and has been moved twice with it to larger quarters. First, in 1883 to the hand-

some room provided for it in the Boylston Street Building. Here it remained for twenty-three years, during which time the number of specimens was about doubled. Finally in the year 1906 it was placed in its present location, in the entire upper part of the Administration Building of the Harvard Medical School group, on Longwood Avenue.

The first curator was Dr. J. B. S. Jackson, also professor of pathological anatomy, who was appointed in the year 1847. His interest in the collection was untiring and the additions he made to it were very numerous. He retired in 1879, when the present curator was appointed.

In 1905, the funds for the use of the Museum were greatly increased by the "Henry Jackson foundation," which placed it on an equal footing with the permanently endowed departments of the School.

THE COLLECTION.

The collection now comprises about eleven thousand specimens, chiefly of human anatomy, normal and pathological with some from the lower animals. These occupy cases in the entrance hall and the two galleries.

The floor and first gallery are devoted chiefly to specimens showing pathological lesions. They are grouped first under the various tissues and organs, and then the changes in them are subdivided upon broad etiological grounds, as follows:

First,—Those due to developmental causes;
Second,—Those due to new growths;
Third,—Those due to injuries;
Fourth,—Those due to infectious processes;
Fifth,—Those due to disturbances of nutrition;
Sixth,—Those due to doubtful or unknown causes.

A label in large type on the door of each case indicates the organ or tissue, and smaller labels on the shelves mark the subdivisions; while on the card attached to each specimen is a brief statement of the special points of interest which it shows.

THE ARRANGEMENT.

ENTRANCE HALL.

The cases on the floor are numbered consecutively, commencing with No. 1 on the left (west) side of the entrance, and contain specimens showing lesions of the bones, joints and tissues covering them.

Cases	1– 4.	New growth.
"	6–11.	Fractures.
"	12.	Historical gun-shot injuries.
"	13.	Dislocations.
"	14–16.	Osteomyelitis.
"	17–19.	Syphilis and Tuberculosis.
"	21–24.	Deformities of bones and joints.*
"	26–28.	Lesions of the connective tissue and muscles. Hernia.

*A Bulletin has been published describing the most interesting specimens in Cases 14–24 ("No. 1 Pathological Anatomy. Bones. Joints. Synovial membranes. Tendons.")

FIRST GALLERY.

The cases commence with No. 29 on the left (west) end directly over No. 1, on the floor, and contain specimens showing lesions of the internal organs.

Cases 29–32. Uterus, Ovum, Placenta, Cord.
" 33–36. Fœtal malformations.

NORTH SIDE.

Cases 37–39. Heart and Blood vessels.
" 40. Lymph nodes and Lymphatics.
" 41–42. Brain and Nerves.
" 42–43. Air passages and Lungs.
" 44–45. Mouth, Oesophagus, Stomach.
" 46–48. Intestines.
" 49. Liver and Gall bladder.
" 50. Pancreas and Omentum.
" 51–52. Kidney and Bladder.
" 53–54. Male genitalia.
" 55–56. Uterus.

SOUTH SIDE.

Cases 57–58. Female genitalia. Ovary and Tube.
" 59–60. Breast.
" 61. Skin.
" 62. Day Models of Leprosy.
" 63–66. Baretta Models of Cutaneous Diseases.

SECOND GALLERY.

The normal anatomical collection arranged by Professor Dwight, occupies the cases on the west end, and north and south sides of the gallery. The cases commence with No. 67 in the west end.

WEST END.

Cases 67– 69. The Development of Bones. The Skeleton. Separate Bones.

Cases 70– 71. The Architectural Structure.
" 72– 74. Variation of Bones of the Shoulder-girdle, Arm and Hand.
" 75– 77. Pelvis and Leg.
" 78– 82. Foot.

Centre Cases.—Brain, Nervous System, Frozen Sections.

NORTH SIDE.

Cases 83– 92. Ossification at different ages, Variations of the Vertebrae.
" 93– 98. Variations of the Skull.
" 99–102. Race Skulls.

SOUTH SIDE.

Cases 119–120. Utero-gestation.
" 121–128. Viscera.
" 129–137. Vascular System.
" 138. Muscles and Joints.

Centre Cases.—Integument.
Table Cases.—Corrosions,

EAST END.

Cases 103–104. Lesions of the Thyroid and Ductless Glands.
" 105. The Eye.
" 106–109. The Ear.
" 110. Miscellaneous.
" 111–116. Comparative Anatomy.
" 113–114. Parasites.

Table Cases.—Old Surgical Instruments.
Centre Cases.—Tello Collection of Peruvian Skulls.

A FEW INTERESTING SPECIMENS.

While every specimen is interesting, there are some which are more so from their rarity, peculiarity of structure or historical associations.

The first of these is the famous "Crow-bar Skull" (on the table opposite the entrance). It came from a man through whose head a tamping iron was driven completely by the premature explosion of a blast. He lived for thirteen years afterward with the loss of one eye, but with unimpaired intellect. Much of the anterior part of the left frontal lobe of the brain must have been destroyed, yet his speech and memory for words were not affected.

Another is a very remarkable growth of mixed bony, cartilaginous, mucous, fibrous and sarcomatous tisssue (case 2, shelf 2). It had destroyed the greater part of the face, and was such a horrible disfigurement, and made the man such an object of aversion, that his life was little better than that of an animal. It was successfully removed, and he lived for three years able to earn a livelihood by selling books. He died from pneumonia without any recurrence of the growth.

The historical collection (case 12) goes back to the year 1783, in which the School was founded. It is commemorated by a gift to the College, in

that year, of a little wax figure of a particolored child, born of black parents in the Island of Martinique.

There are also specimens of injuries received in the Battle of Waterloo, the Battle of the Pyramids, the Massacre at Scio and the wars of the last century in which this country has been engaged.

In the same case (case 12) is one of the original inhalers used by Dr. Morton in the administration of ether.

In case 13, shelf 4, are the pelvis and femora showing a double dislocation of the hip. A man was thrown from his horse in 1821, and sustained an injury which was supposed to have been a fracture, but later was diagnosed as a dislocation by Dr. John C. Warren. The patient was a plaintiff in a famous suit for damages, which after several trials was finally non-suited. The man died in 1858, and the specimen was obtained, proving the diagnosis of dislocation to have been correct.

In the first gallery (case 62) is a unique collection of models of leprosy. These were made by the late Dr. Frank R. Day, of Honolulu, and are wonderfully faithful representations of cases which he had studied. He devoted many years of his life to the work, and the collection was placed in the Museum by Mrs. Day, who personally repaired many of them which were injured in transportation.

The fœtal malformations (cases 33–36) are well worth inspection, the varieties of acardiac and double monstrosities being especially complete.

The cast of an infant completely united at the

pelvis, which lived for some months, is in a separate case, close to the stairway.

There are two specimens of wounds of the heart by a lead pencil (case 37, shelf 3). In each case it was made by an insane patient with suicidal intent.

A specimen of complete thrombosis of the vena cava inferior reaching up to the heart is in a large jar near case 39.

A specimen of ligature of the subclavian artery three years after operation is in case 39, shelf 3. In reducing a dislocated shoulder a large branch of the axillary artery was ruptured, which caused repeated hemorrhage necessitating the tying of the subclavian about six weeks after the accident. He recovered slowly and died from dysentery. Part of the subclavian is reduced to a mere cord. The collateral circulation was carried on by the intercostal branches of the internal mammary artery.

In case 41 are several hydrocephalic skulls and the section of the brain from one.

There are two brains sectioned to show the course of a bullet through them, in one of which life was ended so quickly that there was no hemorrhage into the surrounding tissue (case 42, shelf 1).

The difference in size that malignant disease of the stomach can cause in that organ, is strikingly shown in two specimens (case 44, shelf 4), one of colloid and the other of scirrhous cancer.

The surgery of the gall bladder has furnished very many interesting examples of diseased conditions associated with gall stones. In one of them

it was estimated that thirty-eight thousand calculi had been formed (case 49, shelf 4).

Many of the original specimens of pancreatitis, described by Dr. Fitz in his memoir on that subject have been preserved, and form a fine collection to illustrate that disease (case 50).

Among the urinary calculi in one of the largest cystin stones on record ; and another which is one of the largest calculi ever removed from the bladder of a living patient (case 52, shelf 2).

The different appearances and degenerative changes in fibro-myoma of the uterus can be well seen in the specimens (case 55), while cancer of the breast is shown in all its forms (case 60).

The anatomical collection is remarkable for its specimens of variations of bones which have been studied, arranged and carefully labeled by Professor Dwight.

In case 70 are shown a number of sections of the chief bones of man and some animals illustrating their architectural structure.

A collection of shoulder blades (case 72–73) is especially comprehensive. Among the humeri is a unique one with a complete supracondyloid foramen (case 74).

A great deal of attention has been given to the variations of the bones of the hand and foot, more particularly to the carpus and tarsus (case 75–82) and the collection shows several unique specimens.

Among the most remarkable of the specimens of the foot are two (case 82). One shows a free cuboides secundarium on one foot, and a large process from the cuboid representing it on the other.

When this was added in 1911, there was but one similar specimen in the world, at Strasburg. Professor Dwight has recently added a second unique case, in which this element is free on both sides.

Of chief importance are the numerical variations of spines. They are divided into a number of classes which are subdivided into groups. The general plan is as follows:

Class 1, Group A (case 85), shows irregularity at the junction of the back and loins in spines with a normal number of presacral vertebrae. It implies that there is either a rib too many, or a rib too few, and that the transitional element, which makes the class, either is a rib or a transverse process.

Group B shows irregularity at the junction of the neck and back, implying that there is a cervical rib or a rudimentary first one.

Class 2 (case 87–88–89) shows a tendency to the increase of presacral vertebrae. The series shows the 25th vertebra continually less and less sacralized, until at last it is almost free.

In Class 3, there is at least one additional presacral vertebra, and in this division are two spines (case 92), worthy of mention in which there are twenty-seven free presacral vertebrae on one side and twenty-six on the other. The difference is due to the fact that the 27th vertebra is sacralized on one side and like the lumbar vertebra on the other.

Without going through the series in detail, the other classes, in general, show a diminution of the presacral vertebrae. Among them are some exceedingly rare ones (case 91), one of which has a cervical rib on one side passing to the sternum in

practically the same way that the normal first rib does. In another the peculiarity of the atlas is unique.

Arranged in the upper part of cases 86–92 are a series showing the ossification of the epiphyses of the long bones at different ages.

The collection of skulls is intended to show a few chief types, and also the changes due to development after birth, and the peculiarities which the skull may present. There are some very fine specimens of stylohyoid ossification (case 94), and of extremely long and narrow skulls (case 95), as well as high ones. Also a number of cases of union of the atlas with the skull (case 97), most of them evidently developmental. In a few the atlas is perfectly developed and symmetrically placed, and the anchylosis is probably due to pathological changes after birth.

The collection of Wormian bones (case 97–98) is very comprehensive.

In the north side of the gallery, among the arterial specimens there are many variations of vessels from the aortic arch, and in one (case 136) an instance of the arch crossing the right bronchus.

There are also some very beautiful celloidin corrosions made by Dr. Mixter, especially of the arteries of the hand and leg.

One of the most interesting vascular anomalies is in case 130, in which there is complete absence of the inferior vena cava below the diaphragm.

In the central part of the east end are the old surgical instruments showing the gradual evolution

of many forms. Among them are those illustrating the steps taken by Dr. H. J. Bigelow in perfecting his evacutors for litholapaxy.

The Tello collection of Peruvian skulls, more than half of which show evidence of disease, or of surgical interference of the nature of trephining, is placed here. It is notable as being the largest collection of this kind in the world, and is worthy of close study.

The skull of Spurzheim, the founder of phrenology, and of his friend Dr. Roberton, are in case 102. They were obtained by the late Dr. Warren when the phrenological society was disbanded, together with its collection of casts, many of which are still stored in the Museum.