

take origin, but the short wide trunk divides differently; it first gives off the left common carotid artery, and then proceeding onwards for a short distance, divides (like the innominate in man) into a right subclavian, and a right common carotid.

Considerable variation, therefore, is exhibited by Marsupials in the mode of origin of the carotid and right subclavian trunks. The separate origin of the left subclavian is almost universal throughout the group. Mr. Forbes, Prosector to the Zoological Gardens in London, mentions one member of the order (viz., *Belideus breviceps*¹) in which all the vessels arise from one common trunk or anterior aorta.

The coronary arteries in all the specimens were two in number, and in all the left was much larger than the right. Their openings in the aorta were distinctly above the level of the free margins of the valve segments.

In the *Thylacine* and *Dasyure* the superior intercostal artery of each side springs directly from the aorta at the point where it first touches the spine. This vessel lies in series with the other intercostal arteries, but differs from them in being about three times as large. It runs forwards, and after supplying twigs to the three anterior intercostal spaces it disappears by passing upwards to the dorsal region between necks of the third and fourth ribs. Gaining the superior aspect of the vertebral column, it proceeds forwards between the splenius and semi-spinalis muscles. It can be traced as far as the occipital region.²

Pulmonary artery.

The only point to be noted in connection with this vessel is that in none of the animals examined by me was there the slightest vestige of an obliterated ductus arteriosus to be discovered.

Great veins of the heart.

As usual in Marsupials each animal possesses three great caval veins, viz.—(1) a right anterior vena cava, (2) a left anterior vena cava, and (3) a posterior vena cava.³

The right anterior vena cava has the same position, relations, and manner of ending as the superior vena cava in man. It pierces the pericardium on the inferior aspect of the root of the right lung and opens into the anterior part of the right auricle.

The left anterior vena cava retains its embryonic course and, piercing the pericardium on the inferior aspect of the root of the left lung, it turns to the right, on the posterior aspect of the heart, in the auriculo-ventricular groove. Here it occupies the same position

¹ Mr. W. A. Forbes, on the Koala, Proc. Zool. Soc., January 1881, p. 189.

² In Professor Owen's celebrated article on the Marsupialia in the Cyclopædia of Anatomy and Physiology, the author states that the brachial artery in *Thylacinus* passes over the internal condyle of the humerus, impressing it with a more or less deep groove. In both of my specimens the artery along with its accompanying veins passed through the supra-condyloid foramen.

³ In the *Belideus breviceps* there appears to be only one anterior vena cava. Vide Mr. Forbes' paper on the Koala, Proc. Zool. Soc., 1881, p. 188.