Cardiac veins.

The cardiac veins were very carefully followed out in the heart of the *Thylacine*. An opening was made into the larger veins, and then the whole cardiac venous system was inflated by a blow-pipe. In this way the vessels could be traced with great precision.

The cardiac veins may be divided into an anterior and a posterior group.

The posterior cardiac veins open into the left anterior vena cava as it lies in the groove between the left auricle and left ventricle. One of these veins is much larger than the others. It begins at the apex (usually upon the anterior surface) and ascends in the posterior interventricular furrow to join the left caval vein close to its termination.

The anterior cardiac veins consist of—(1) some small twigs ascending upon the anterior surface of the right ventricle to open independently into the right auricle, and (2) the great cardiac vein—a vein which is always so conspicuous in the Mammalian heart.

The great cardiac vein takes origin near the apex of the heart. It ascends in the anterior interventricular furrow, and receives numerous tributaries, so that when it reaches the auriculo-ventricular groove it has attained a very considerable magnitude. So far its course agrees with that seen in other Mammals; now, however, instead of winding round the left margin of the heart to join the left anterior vena cava, it deviates to the right, passes behind the pulmonary artery and the aorta, and opens into the upper part of the right auricle, close to the entrance of the right anterior vena cava (Fig. 5). As it lies behind the aorta and pulmonary artery it expands somewhat, and some of the muscular fibres of the heart are thrown over it.[1]

Owing to the small size of the heart in the other animals examined these points could not be made out with the same precision. In all, however, no cardiac veins joined the left anterior vena cava except those from the posterior surface of the heart; in all a small venous opening was noticed in the right auricle close to that of the right anterior vena cava; and in the *Dasyure* and *Cuscus* a fine probe introduced into this passed along a venous channel which lay behind the aorta and pulmonary artery. From these facts I conclude that they all present the same arrangement of cardiac veins.

Owen, in the third volume of his work upon Comparative Anatomy and Physiology, states that "the opening of the left precaval is close to that of the postcaval in a position analogous to that of the coronary vein in man, which here opens into the left precaval." The coronary vein which he thus refers to is, no doubt, the large posterior cardiac vein which ascends in the posterior interventricular furrow. I cannot, however, understand a remark made by Mr. Forbes[2] in his paper upon the Visceral Anatomy of the Koala, viz., that "there is apparently only a single opening for the coronary veins, just at the entrance of the inferior cava into the auricle." Writing upon the same animal

[1] It is interesting to note that at the point where this vein opens into the right auricle there is almost invariably in the human heart the minute orifice of a vein of Thebesius.

[2] Proc. Zool. Soc., 1881.