

*Right auricle.*—The cavity of the right auricle presents the same characters as those noticed in *Thylacine* and *Dasyure*. The opening of the great cardiac vein, however, is very difficult to find, as it is hidden by *musculi pectinati*.

*Right ventricle.*—The cavity of the right ventricle shows several points of difference. The *columnæ carneæ* are confined almost entirely to the anterior wall. The *musculi papillares* are two in number, and both spring from the septum. They are long and slender, and one is situated near the anterior interventricular furrow, whilst the other takes origin close to the right sharp margin of the heart. A complete chain of “moderator bands” extends downwards from the *conus arteriosus* to the apex of the cavity, and binds the anterior wall firmly to the septum. Those which are highest are so large that they even exceed in size the *musculi papillares*, but they gradually diminish as they are traced downwards to the apex.

The right auriculo-ventricular valve presents four separate membranous segments. These cusps are arranged so that two are placed anteriorly, one to the right, and the fourth, much larger than the others, posteriorly against the septum. The first three of these are connected by *chordæ tendineæ*, with the *musculi papillares*; the large posterior cusp is bound down by short, strong tendinous cords which take origin from the septum. It therefore possesses a very limited range of movement.

*Left auricle.*—The cavity of the left auricle differs from that in *Thylacine*, in having its appendicular walls smooth except towards its free margin, where it shows the reticular arrangement of *musculi pectinati*.

*Left ventricle.*—In the left ventricle, the *columnæ carneæ* are something marvellous in their intricacy and delicacy.

The heart of the *Vulpine phalanger* closely resembles that of the *Cuscus*. The notching of the right auricular appendage is quite as strongly marked, and the only points of difference are found in the right ventricle. Here there are four *musculi papillares*, all of which spring from the septum and all of which are connected with the three small cusps of the right auriculo-ventricular opening. The large posterior cusp, as in *Cuscus*, is bound directly by *chordæ tendineæ* to the septum. Further, the moderator bands are neither so distinct nor so numerous.

In the *Phascogale* we note the following points:—(1) the right auricular appendage shows a slight trace of notching, but this has no relation to the root of the aorta; (2) a slight notching of the left auricular appendage is also observable; (3) the *musculi papillares* are two in number in the right ventricle, and both arise from the septum.

It would appear, therefore, that the distinguishing features of the marsupial heart are two in number, viz.—(1) the absence of all trace of an *annulus ovalis* and a *fossa ovalis*, and (2) the peculiar position in the right auricle of the orifice of the great cardiac vein. The notching of the right auricular appendix cannot be regarded as a universal distinction, but when it is present it is a feature of great prominence. It is very clearly figured