

AORTIC ARCHES IN REPTILES:

The complete disappearance of the gills, the reptilian arches formed a typical plan from which the arches of birds and mammals evolved.

The elongated neck region, posterior shifting of the heart from the pharyngeal region and partial separation of ventricle into two chamber (completely in crocodiles) have a decided effect on the proportions of the arches. As a result, the following conditions have become established in the higher reptiles.

- (i) The more complete separation of the ventral aorta into two groups of vessels as they leave the heart.
- (ii) The loss of fifth pair of arches. (ARCHES).
- (iii) The loss or reduction of the ductus arteriosus, connecting part of the sixth arch with the aorta.
- (iv) The removal of the third arch is represented by the base of the carotid which may (in Sphenodon) or may not have connection with the dorsal aorta.

- (v) The fourth pair of arch becomes the main systemic arches and contributes most of the blood to the aorta.
- (vi) The sixth arch becomes pulmonary aorta. it originates from the right side of the ventricle.
- (vii) The carotid is connected to the right systemic through the common carotid.
- (viii) The right systemic is, therefore, also called carotico-systemic trunk. This arises from the left ventricle and has aeriated blood.
- (ix) The two systemics communicate with each other by an opening at the place where they cross each other. This opening is called foramen of panizza.

Aortic arches in Amphibian & Reptiles:

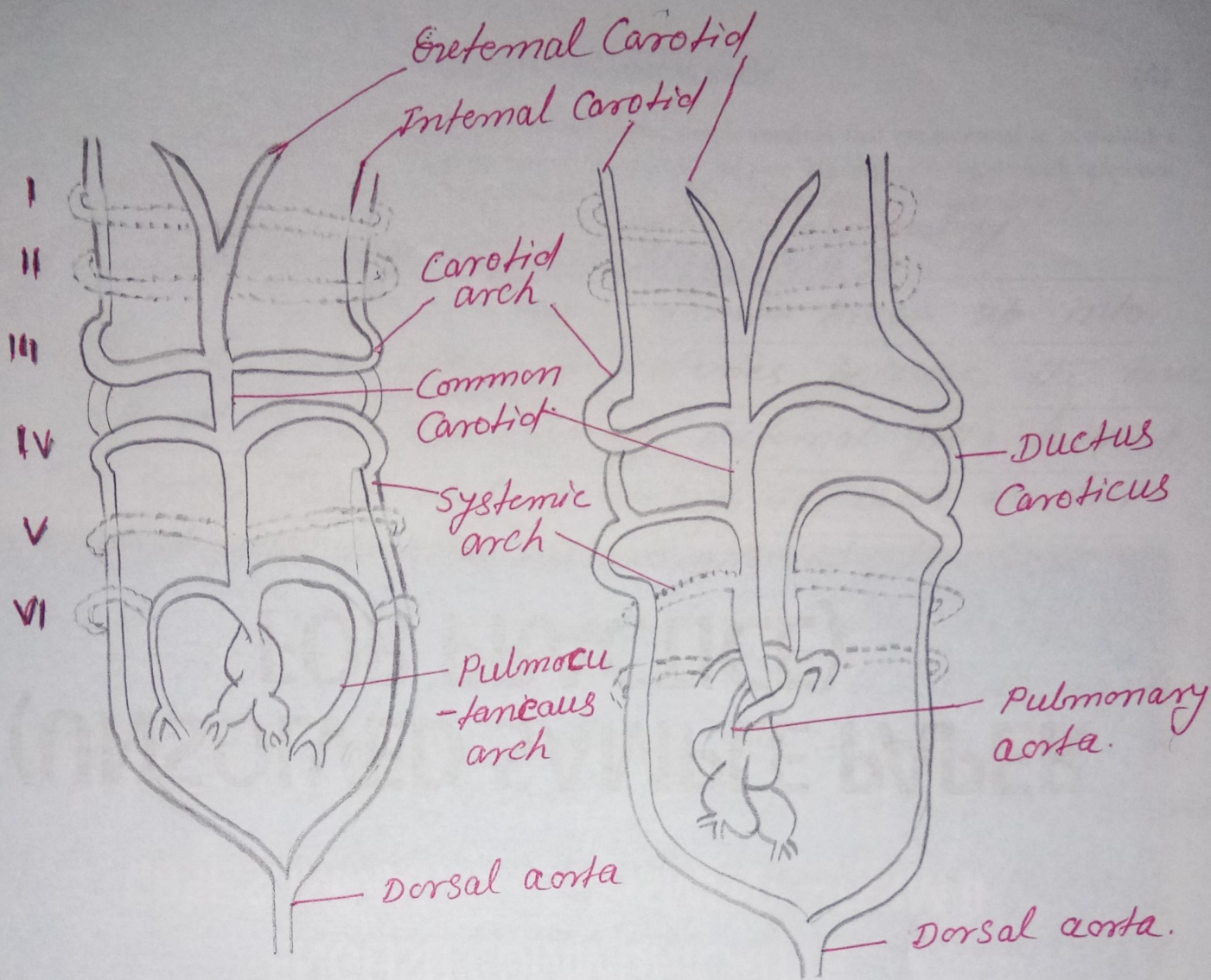


Fig:— Aortic arches in Amphibian and Reptiles.

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