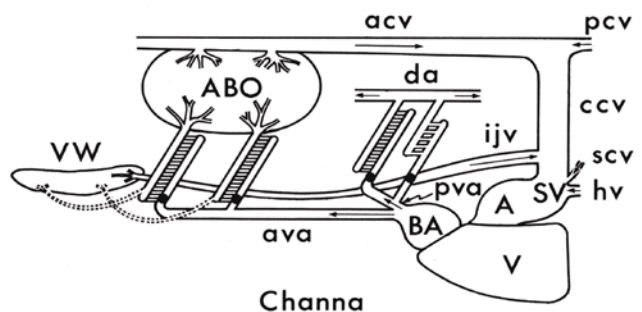




## Cardiovascular anatomy and physiology of air-breathing fishes

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Extant air-breathing fishes show various structures for breathing atmospheric air. In contrast, most air-breathing fishes retain typical piscine design of cardiovascular system with little trend for separation of oxygen-rich blood from the air-breathing organ and oxygen-poor blood from the systemic bed. Lungfishes are notable exceptions, having the capacity for partial separation of these two types of blood, supported by anatomical specialization of the cardiovascular system. Among teleosts, snakeheads are only species, whose arterial oxygen levels are shown to be different between “respiratory” and “systemic” circuits. Detailed inspection of old anatomical literature points out the possibility that there might be many more fishes that have evolved toward double circulation than we know today. Young students are encouraged to explore the issues of the phylogenetic development of cardiovascular system in vertebrates, one of the most fundamental questions in zoology.



Wednesday March 29th at 14.15  
Room 127 (zoofys kaffestue), building 1131