AN HYPOTHESIS FOR HOMOLOGIZATION OF THIGH MUSCULATURE IN REPTILIANS

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The homologization of thigh muscular nomenclature in extant reptilians has not been done satisfactorily. Comparison of avian and crocodylian patterns suggest that M. cuppedicus is the homologue of M. puboischiofemoralis internus I; the undifferentiated M. iliotrochantericus and M. iliofemoralis are the homologues of M. puboischiofemoralis internus II and the crocodylian homonymous muscle, respectively. The name M. zonofemoralis (ZNFM) is proposed for the assemblage of these three muscles. The hypothesis here presented is that the M. iliofemoralis and M. puboischiofemoralis internus (PIFM) of basal reptilians (lepidosaurs and chelonians) are the homologues of ZNFM and what Romer (1923b, Bull.A.M.N.H., 48:546) called Ambiens II for archosaurians, respectively. The latter, well developed in basal reptilians, is atrophied in archosaurs (absent inside aves). This approach is supported by the obturator innervation and origin, although the insertion is not the same. It is more parsimonious to think that this archosaurian muscle is internally undifferentiated, than being differentiated with losses. Thus, the Romer's (1923a, Bull.A.M.N.H., 48:143) conclusion of dorsal migration of basal reptilian PIFM as an apomorphy of archosaurs should be re-evaluated. Better is to think the atrophying of PIFM and splitting of ZNFM in the course of archosauromorphian evolution through orthogrady.