

COMPARATIVE ANATOMY OF THE *EXTENSOR TENTACULI* MUSCLE IN *LOPHIOSILURUS ALEXANDRI* STEINDACHNER, 1876 (SILURIFORMES, PSEUDOPIMELODIDAE)

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ABSTRACT

Within the family Pseudopimelodidae, *Lophiosilurus alexandri* stands out due to morphology that differentiates it from other groups, as its broad and prognathous mouth, depressed head, dorsal fin with a short and robust spine, tiny maxillary and mentonian barbels. Unique among Siluriformes, the muscle *extensor tentaculi* is responsible for the movement of the maxillary barbels, which assist in food detection and ambient perception. This study aims to analyze and compare the *extensor tentaculi* of *L. alexandri* with other Siluriformes, providing data that contribute to identifying variations and possible synapomorphies. Dissections were performed on *L. alexandri*, and bones and cartilage were stained. The obtained results were compared with *Iheringichthys labrosus*, *Pimelodus maculatus*, *P. microstoma*, *P. ortmanni*, *Bergiaria westermanni*, *Steindachneridion scriptum*, and *Parapimelodus nigribarbis*. The *extensor tentaculi* of pimelodids consists of four muscle bands, two lateral and two medial. In contrast, *Lophiosilurus*'s structure is reduced to only two, one lateral and one medial bands. The reduced form and the pattern of the fibers, which are perpendicular to the body axis in the lateral bands of *Lophiosilurus*, contrast with the analyzed Pimelodidae, which exhibit larger muscles with predominantly transverse fiber patterns. Furthermore, *L. alexandri* is distinct from analyzed pimelodids due to the triangular-shaped *pars medialis* muscle originating from a lateral ethmoid chamber. In contrast, in pimelodids, the *extensor tentaculi* originate from a mesethmoid chamber extending along the proximal end until it inserts into the most distal portion of the autopalatine. The more discreet shape of *Lophiosilurus extensor tentaculi* is likely due to its barbels not longer than those of Pimelodidae since its large mouth and well-developed mandibular muscles effectively compensate for capturing and subduing prey.

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