

Abstract

Teeth represent a key evolutionary novelty of vertebrates. The dentition of the majority of extant vertebrates is present in the oral cavity associated with jaws and palate and/or in the pharyngeal cavity associated with the last pharyngeal arch. The ancestral state of the vertebrate dentition is considered to be presence of teeth through the whole oropharyngeal cavity. This state is however preserved only in few members of extant osteichthyans (for example bichir and latimeria). The other vertebrates gradually lost the pharyngeal dentition. The basal groups of actinopterygians meet the conditions of preservation of the ancestral states and are thus relevant for understanding the initial state in the evolution of vertebrate dentitions. On the other hand, some derived actinopterygian lineages contain members with the most specialized pharyngeal dentitions. This bachelor thesis concentrates on the description of pharyngeal dentitions across vertebrates and focuses on members of basal actinopterygian lineages (bichir, sturgeon and gar), which from the point of view of dental evolution represent crucial, although neglected animals. Detailed description of pharyngeal dentitions of these animals will form a basis for the upcoming Diploma project.

Key words: teeth, dentition, evolution, vertebrates, pharynx