



COMPARITIVE ANATOMY OF CHORDATES

subphylum:vertebrata

group:Agnatha

Lec. ٣ (٢٩/١٠/٢٠١٧)

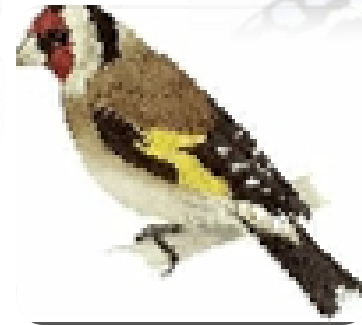
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Subphylum: Vertebrata (Craniata)

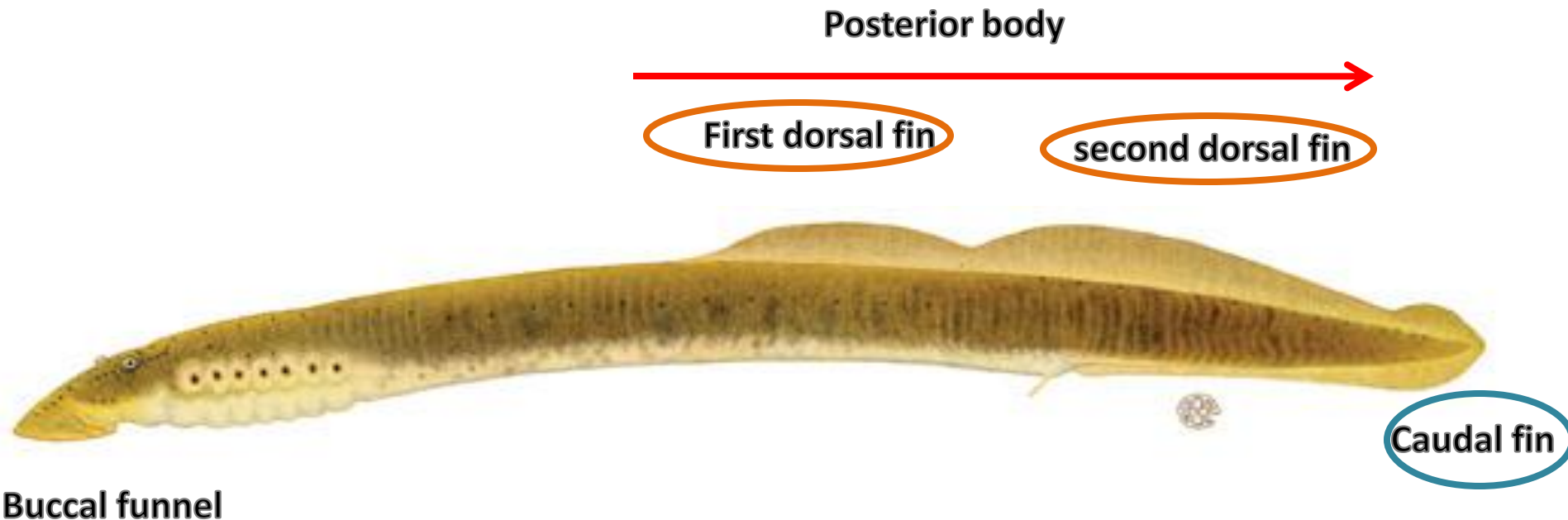
Vertebrates make up the largest group of animals in the phylum chordate.

Vertebrates are divided into two groups such as agnatha and gnathostomata.

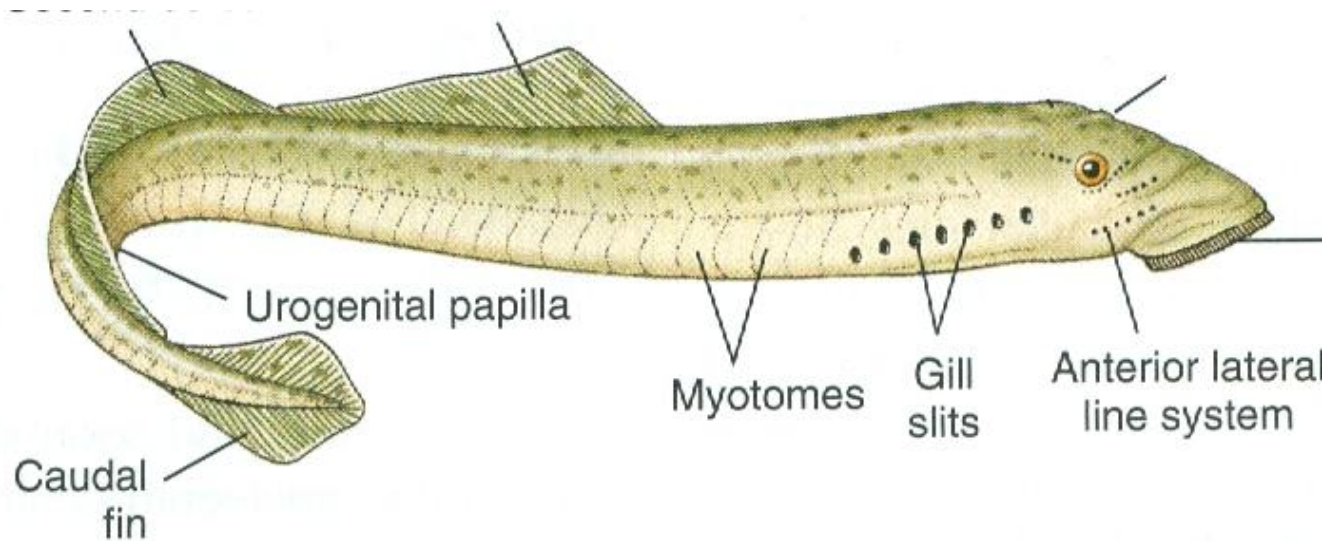
They include **jawless fish (Lamprey&hagfish)**, **cartilaginous fish**, **bony fish**, **amphibians**, **reptiles**, **birds**, and **mammals**.



Lampreys lack scale and paired fin, but median fins are present, at the **posterior body** half bears **two dorsal fins** and a **caudal fin** surrounds to the tail region and continuous with the second dorsal fin.

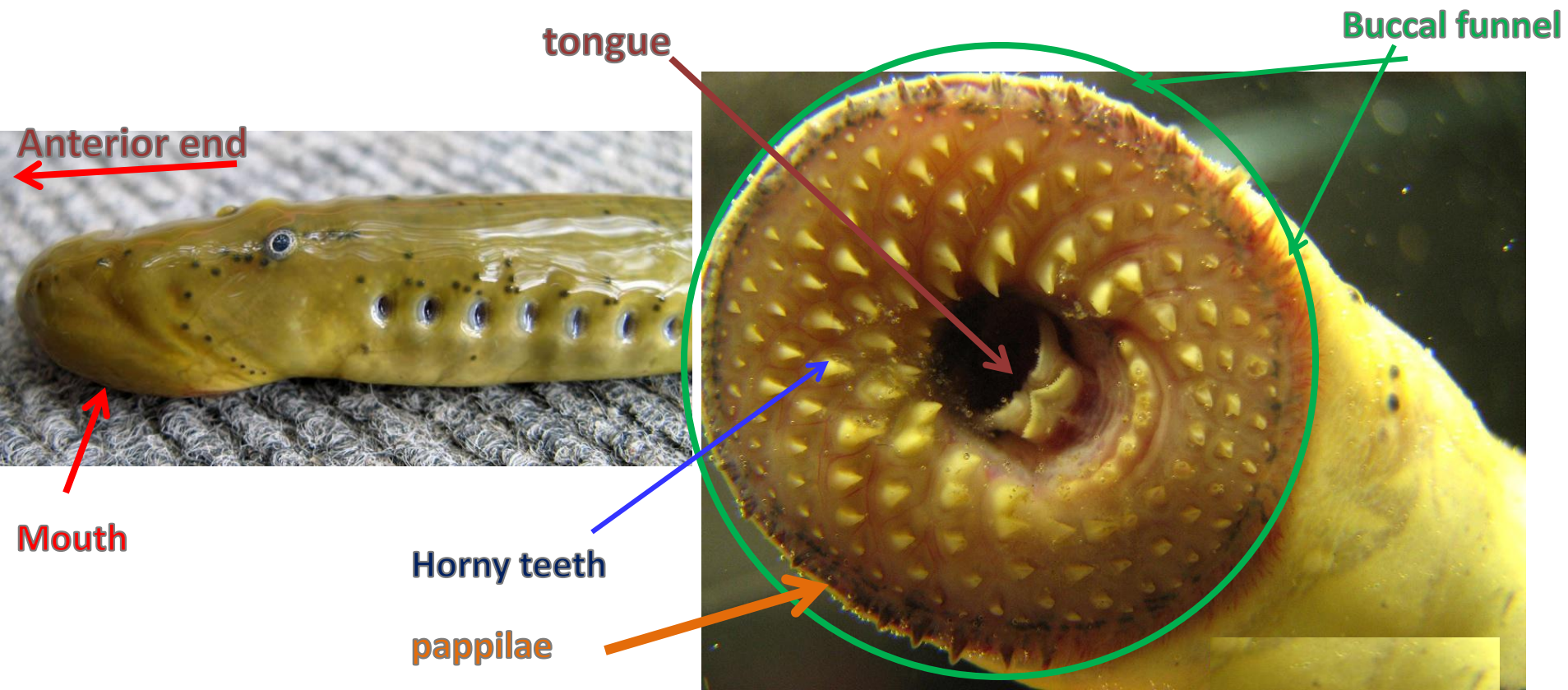


- The body muscles are in form Υ -shaped myotome. Myotomes are separated by myosepta.
- There are ten pairs of cranial nerves.
- jawless and lack back bone entirely.

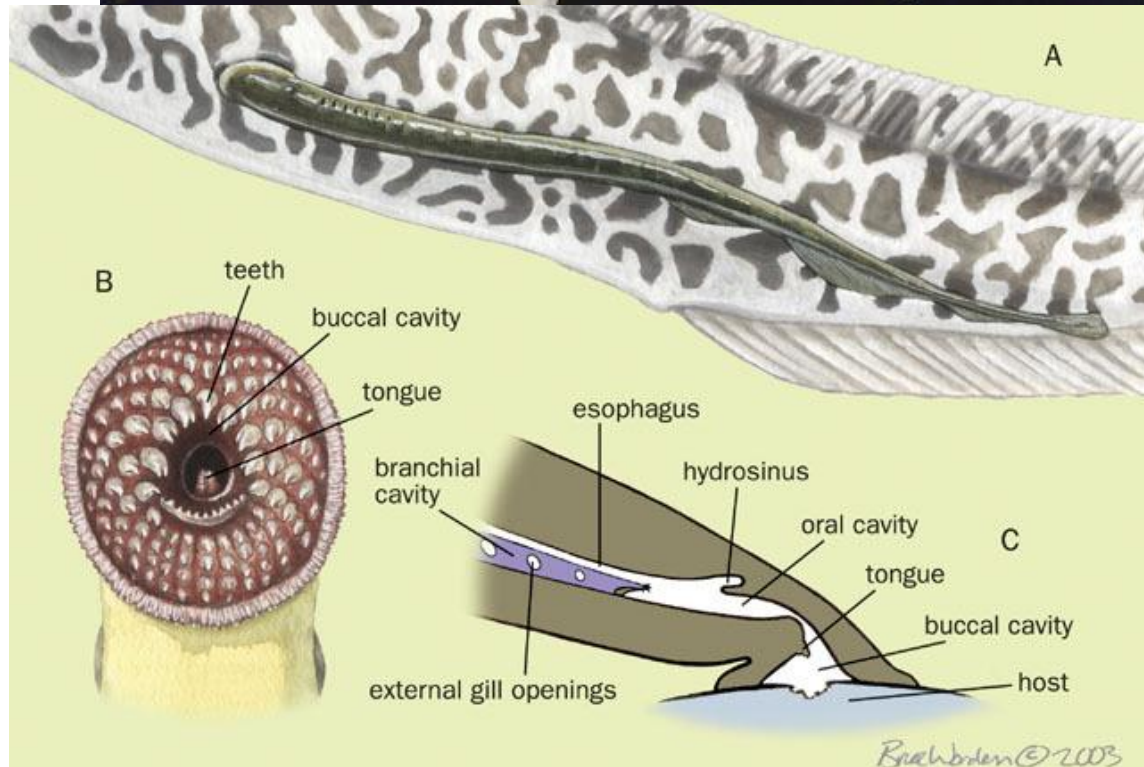
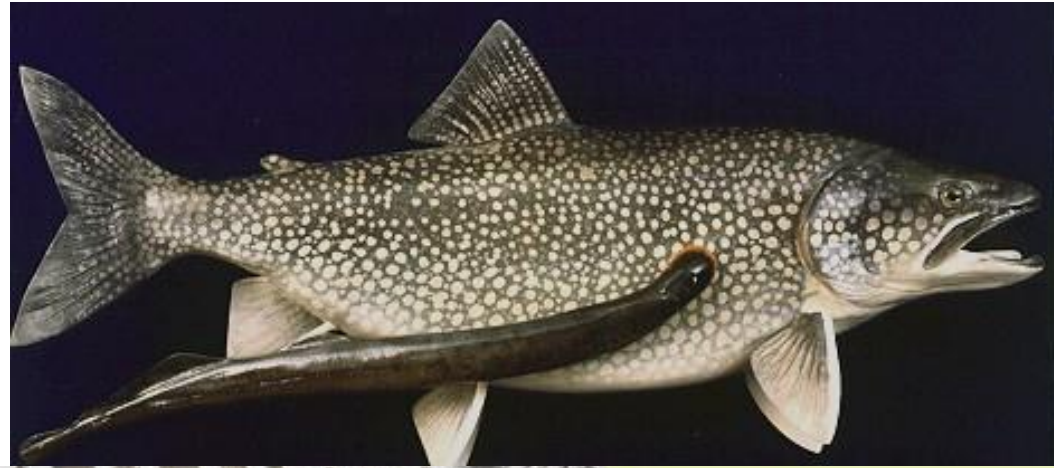
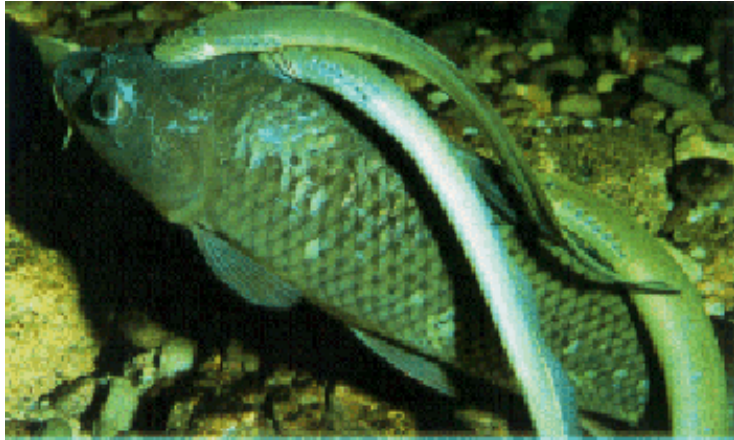


At the anterior end of the head open the circular **mouth** on the ventral side and surrounded by large **buccal funnel** which bears many **horny teeth**.

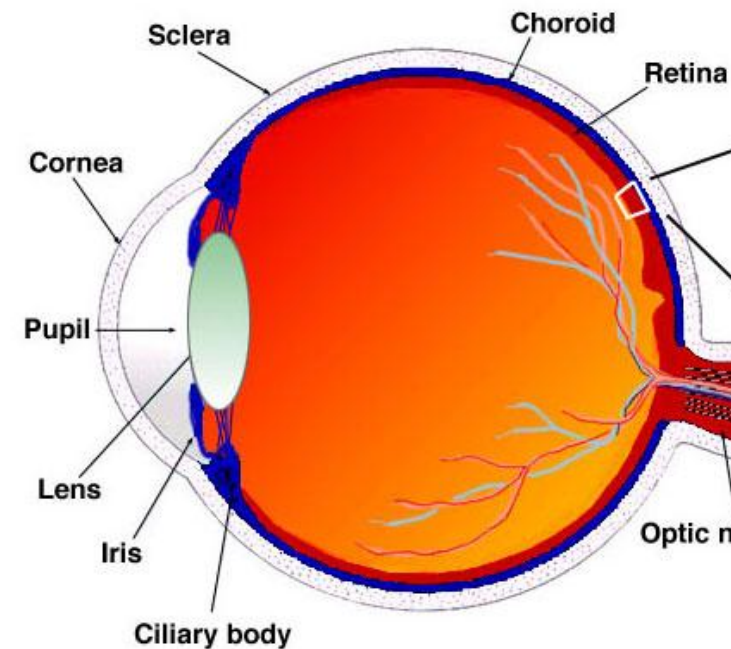
Around the edges of the **buccal funnel** are provided with numerous soft **papillae**. At the bottom of the funnel lies the **tongue**, a projection covered with horny teeth



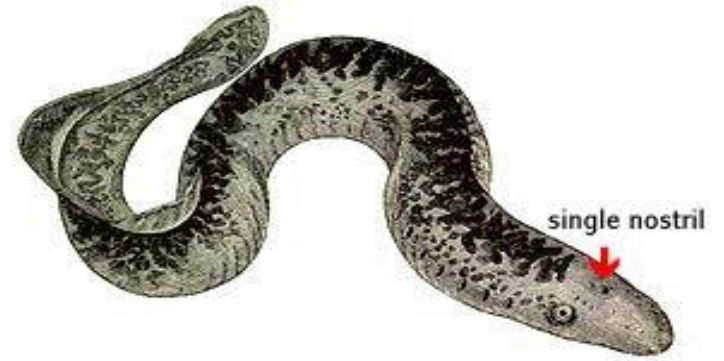
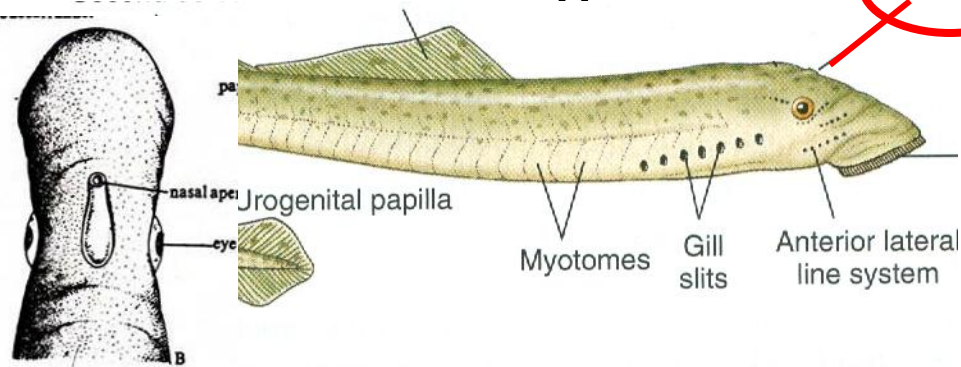
-the Lampreys attaches to fish by using the buccal funnel.



- The eyes is found on either side of head, but not very large and the pineal body contains a lens and pigmented retina.
- The adult lampreys have well-developed eyes.
- Although the general organization of the adult lamprey retina is similar to that of other vertebrates.



-On the dorsal surface between the eyes of the head is a median a single **nostril**



✓-The **anus** is found on the ventral surface under the secondary dorsal fin (between the trunk and tail). Just behind anus is a urinogenital papilla carrying the urinogenital aperture.



The respiratory organ just **posterior to the eye** on the lateral side opens seven pairs of gill pouches with no operculum and separated from one another by interbranchial septa.

