

CLASSIFICATION OF CLASS CYCLOSTOMATA

The cyclostomata are the modified and degenerate offshoot of the primitive vertebrate stalk. Due to their circular mouth, they are named cyclostomata. They are parasitic usually feeding on fish in their adult stage. Morphologically they resemble eels. They are known to be the only living vertebrates without true jaws hence called AGNATHA. Cyclostomata include hagfishes and lampreys.

GENERAL CHARACTER :-

- i. Body long, rounded and eel-like.
- ii. Median fin with cartilaginous fin rays but no paired appendages. Tail deeply crenel.
- iii. Skin soft smooth containing mucous glands without scales.
- iv. Trunk and tail muscles segmented into myotomes separated by myocommata.
- v. Endoskeleton fibrous and cartilaginous.
- vi. Notochord persist throughout life.
- vii. Jaws absent hence included in group - AGNATHA.
- viii. Mouth ventral, suctional and circular. Due to circular mouth, the class name Cyclostomata (pr. - cyclo - circular and stoma - mouth.)
- ix. Nostril is single and median.
- x. Gill 5-16 pairs in lateral line-like

JANUARY

16

Thursday

3rd Week Day 016-350

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01

- pouches of pharynx have another name of class - MARISPOBRANCHII.
- XI. Digestive system lacks a stomach, intestine with a fold typhlosole.
 - XII. Heart two chambered with one auricle and one ventricle.
 - XIII. No renal portal system. Hepatic portal system present.
 - XIV. Body temperature variable i.e. poikilotherms.
 - XV. Two mesonephric kidneys with ducts to urogenital papilla.
 - XVI. Dorsal nerve cord with differentiated brain. 8 to 10 pairs of cranial nerves.
 - XVII. Single median olfactory sac and single median nostril.
 - XVIII. Sexes separate or united. Gonad single, large without gonoduct.
 - XIX. Fertilization external. Development direct with a prolonged larval stage.

About 50 species of the living jawless fishes are recognized. They belong to two major divisions termed variously as subclasses or orders or families.

Order 1 - PETROMYZONTIFORMES -

CHARACTER:-

- members of this order are called Lampreys or Lampreys or Lampereas or Sand prides.
- i. Mouth ventral within a suctorial buccal funnel beset with many horny teeth.
 - ii. Nostril dorsal. Nasohypophyseal sac closed behind not connected to pharynx.
 - iii. Gill pouches and gill slits. 7 pairs each,

Feb 2020 Wk	M	T	W	T	F	S	S
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02

opening in a separate respiratory pharynx.

IV. Dorsal fin well developed.

V. Branchial basket complete.

VI. Dorsal and ventral roots of spinal nerves remain separate.

VII. Ear with two semicircular canals.

VIII. Eggs numerous, small. Development indirect with a larval stage and metamorphosis.

IX. Both marine and fresh water forms.

EX - LAMPREY PETROMYZON

Order - 2 - MYXINIFORMES :-

Representatives of this are called Hagfish. They are exclusively marine.

CHARACTER :-

I. Mouth terminal with 4 pairs of tentacles and few teeth. No buccal funnel.

II. Nostril terminal. Nasohypophyseal duct opens behind into pharynx.

III. Gill pouches 6 to 15 pairs. Gill slits 1 to 15 pairs.

IV. Dorsal fin feeble or absent.

V. Branchial basket poorly developed

VI. Dorsal and ventral roots of spinal nerves united.

VII. Ear with only one semicircular duct.

VIII. Eggs few large. Development direct.

IX. Hagfishes are all marine, includes 15

☒ @ 📧 species.

EX - MYXINE, EPTATRETUS (= BDELLOSTOMA)

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