VERTEBRATE BIOLOGY LABORATORY

SUBPHYLUM: VERTEBRATA (CRANIATA)

SUPERCLASS: AGNATHA (JAWLESS)

(Cyclostomata)

CLASSIFICATION

SUBPHYLUM: VERTEBRATA (CRANIATA)

SUPERCLASS: AGNATHA (JAWLESS)

CLASS I: MYXINI (HAGFISHES)

About 70 species
Genus: *Myxine; Epaptreus*
Habitat: Marine

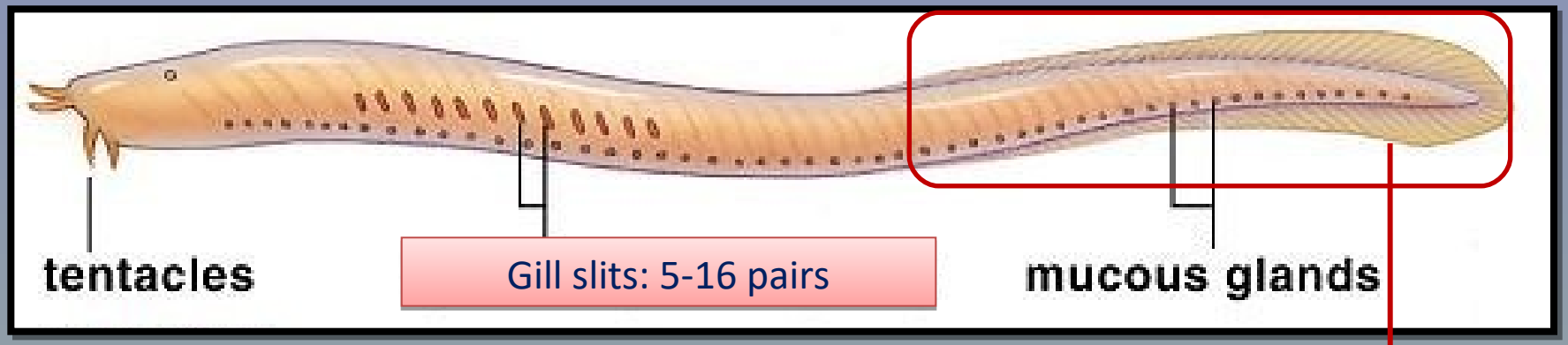
Myxinie glutinosa

Epaptretus sp.

CLASS: MYXINI (HAGFISHES)
EXTERNAL FEATURES-MORPHOLOGY

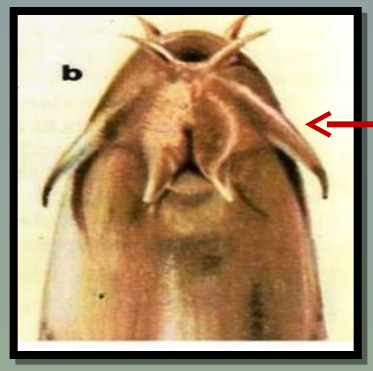
- Eyes poorly developed;
- almost blind
- No eyelid

Body long, slender, eel-like

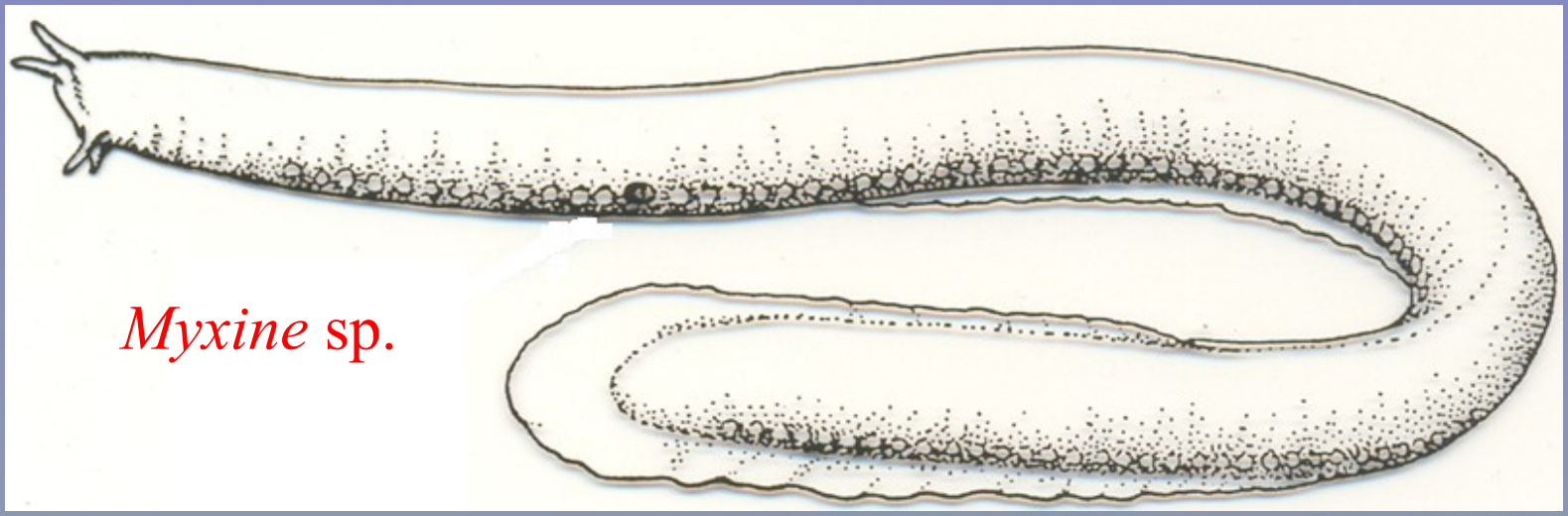


There is no clear neck area

Dorsal, caudal and anal fins combined. No clear dorsal and anal fin



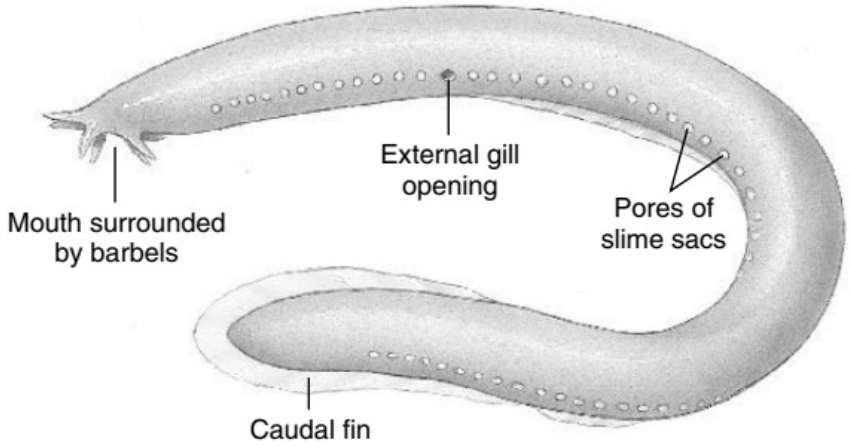
- Sucker and horse-shoe shaped mouth
- Four pairs of sensing tentacles
- One large conical tooth
- Two pairs of tooth-like rasps on the top of a tongue-like projection



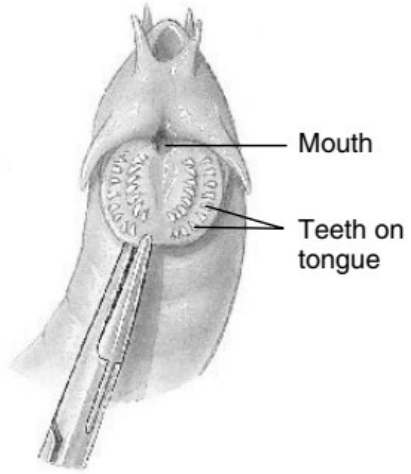
Myxine sp.

Bdellostoma sp.

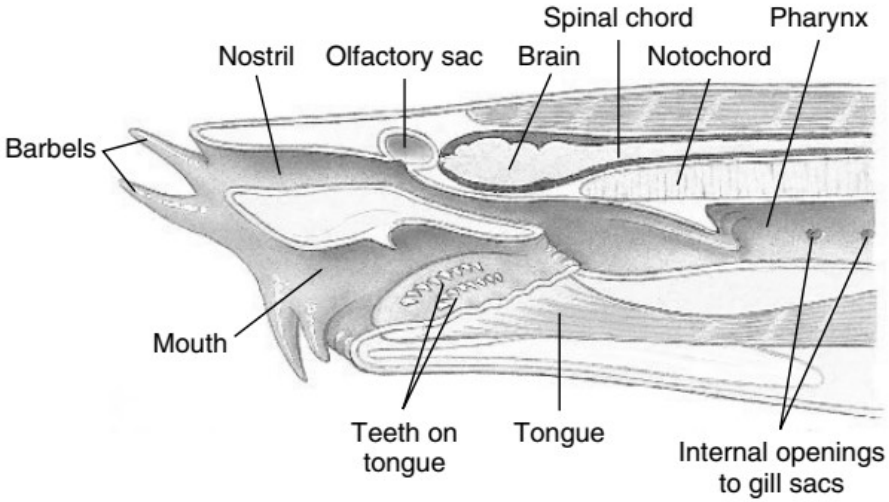
Myxine glutinosa



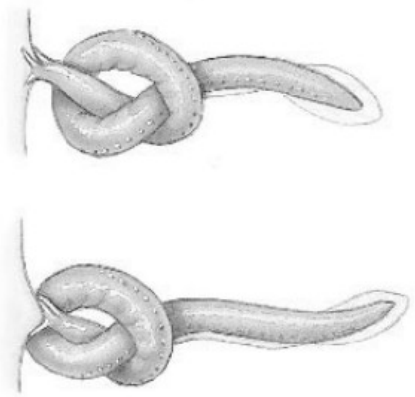
(a) External anatomy



(b) Ventral view of head



(c) Sagittal section of head region



(d) Knotting action used to tear flesh from prey

CLASSIFICATION

CLASS II
PETROMYZONTIDA
(LAMPREY)

About 38 species
Genus: Petromyzon; Ichthyomyzon; Lampetra;
Habitat: Freshwater-Marine
Anadromous

Petromyzon marinus

Lampetra fluviatilis

Lampetra lanceolata
Doğu Karadeniz'den kayıt var.

CLASS: PETROMYZONTIDA (LAMPREYS)
EXTERNAL FEATURES-MORPHOLOGY

- One nostril
- pineal eye behind nostril

- Eyes moderately developed;
- No eyelid

Two dorsal fins

Caudal fin flattened

Body slender, eel-like

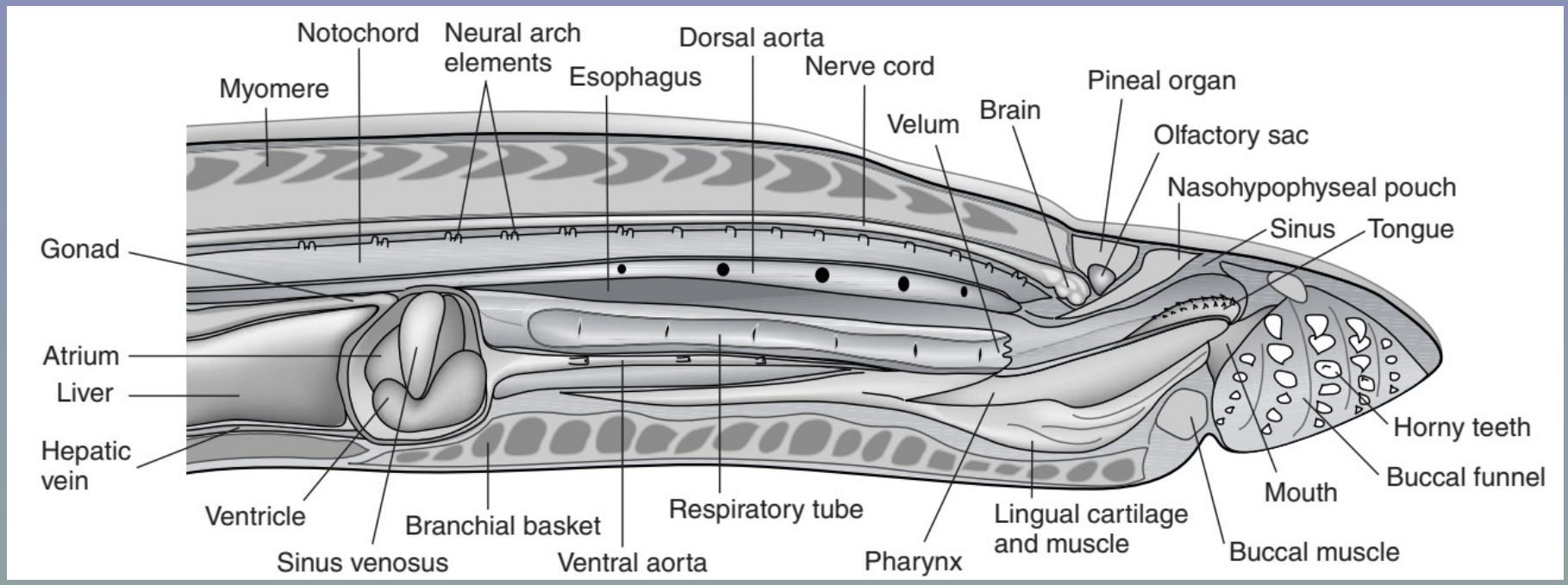
Gill slits: 7 pairs

There is no clear neck area

Anal fin

- Mouth rounded
- Conical horned teeth present (formed from ectoderm)

Sagital section of *Petromyzon marinus*



Sucking mouth of *Petromyzon*

Larval Stage: Sexes are unclear-**HERMAPHRODITE**
Adult Stage: Sexes separetly

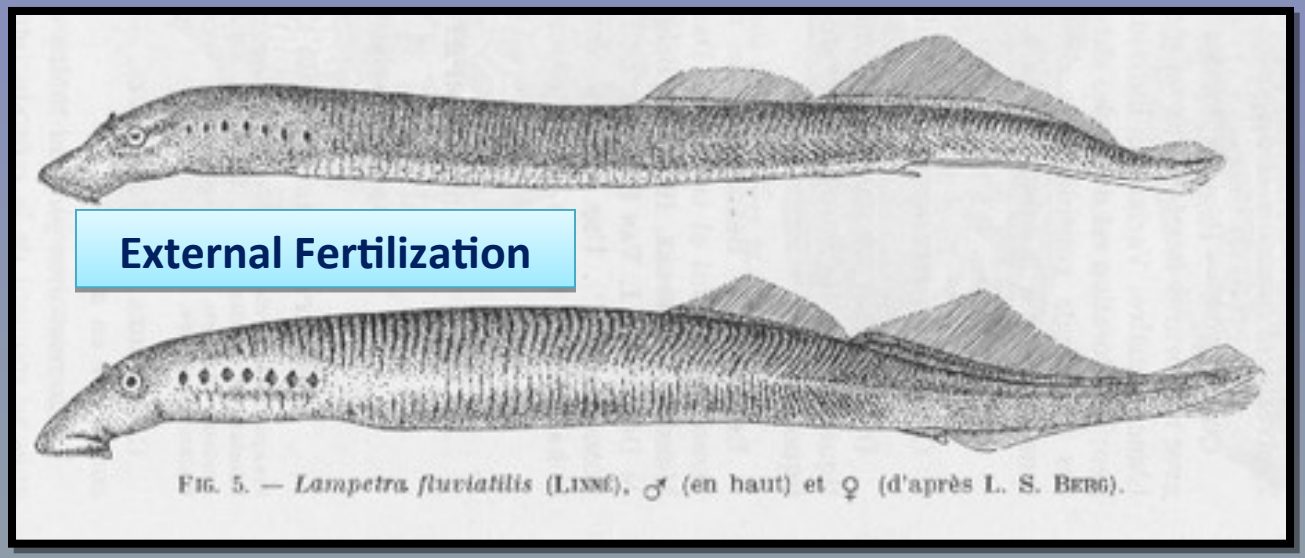
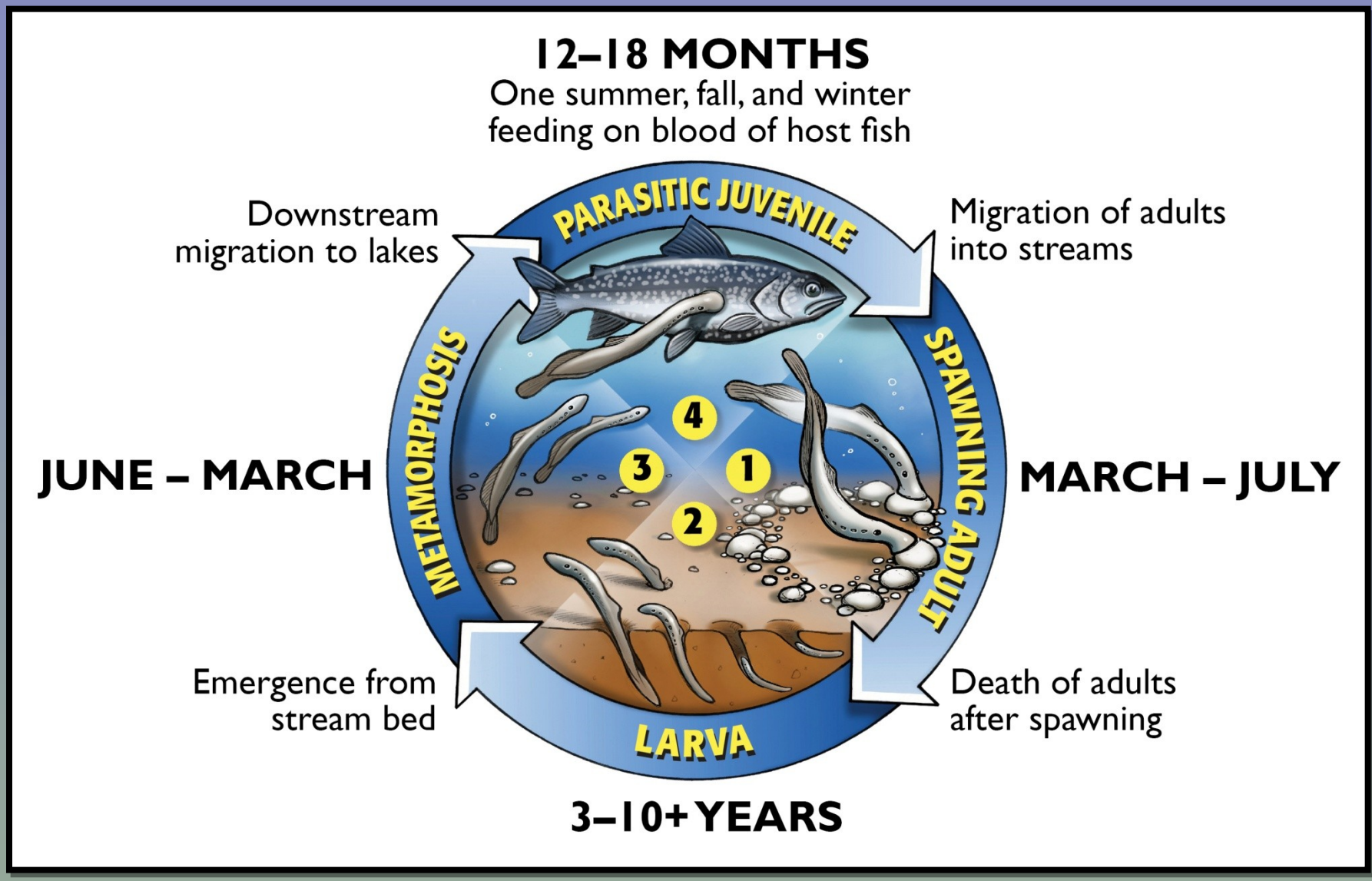


Fig. 5. — *Lampetra fluviatilis* (Linné), ♂ (en haut) et ♀ (d'après L. S. Berg).

All lampreys ascend freshwater streams to breed.
Marine forms are **anadromous**
After spawning, adults die soon.
They have got larval stage which is called **Ammocoetes**
The larvae grows very slowly (for 3 to 7 years) and live as suspension feeders .
Then rapidly **metamorphose** into adults.


12–18 MONTHS
One summer, fall, and winter feeding on blood of host fish
Downstream migration to lakes
PARASITIC JUVENILE
Migration of adults into streams
JUNE – MARCH
METAMORPHOSIS
SPAWNING ADULT
MARCH – JULY
4
3
1
2
Emergence from stream bed
LARVA
Death of adults after spawning
3–10+ YEARS

Changing of Lampreys During Metamorphosis