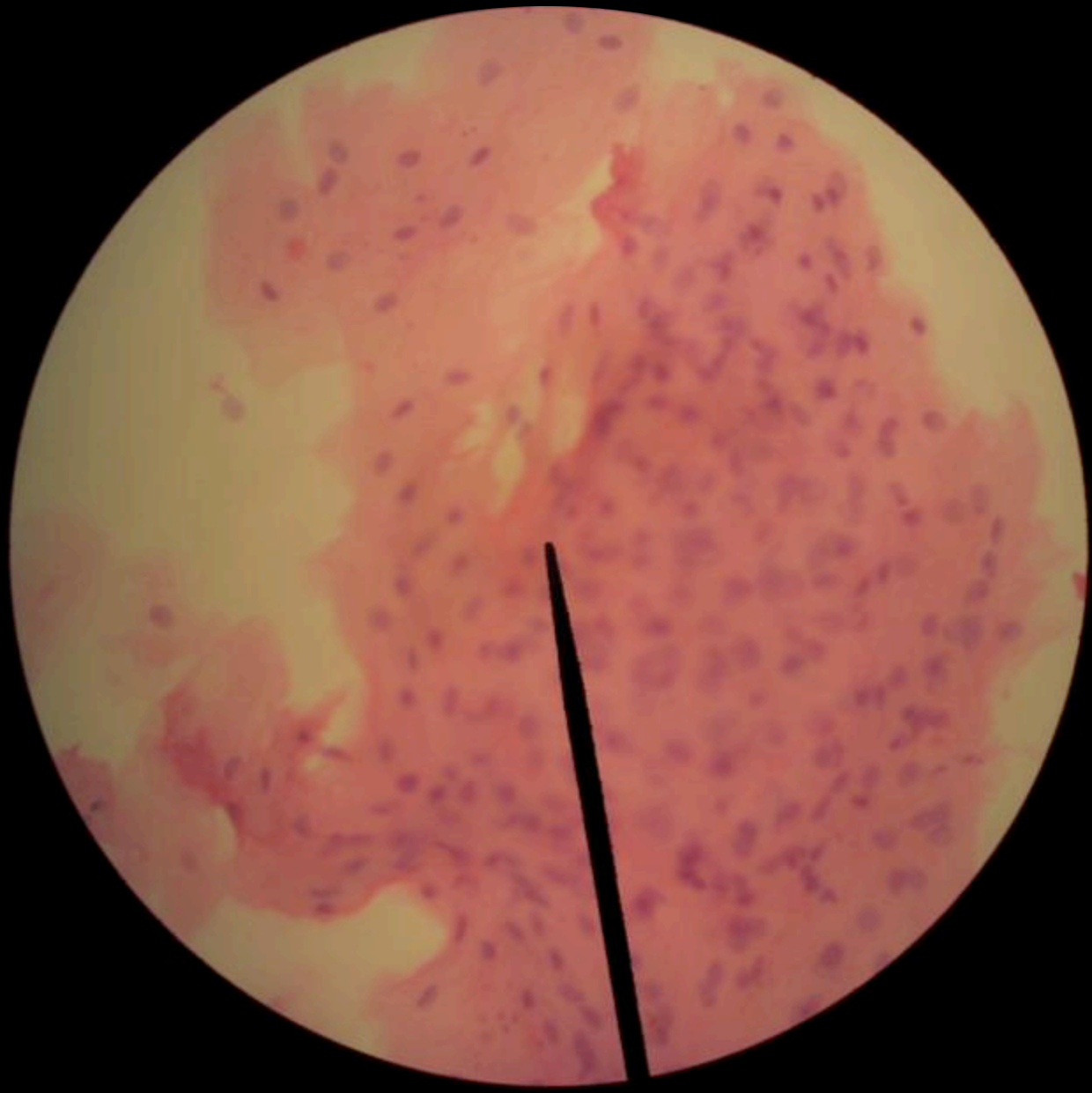
Structure Review

For Practicum 3:

The Invertebrates Labs

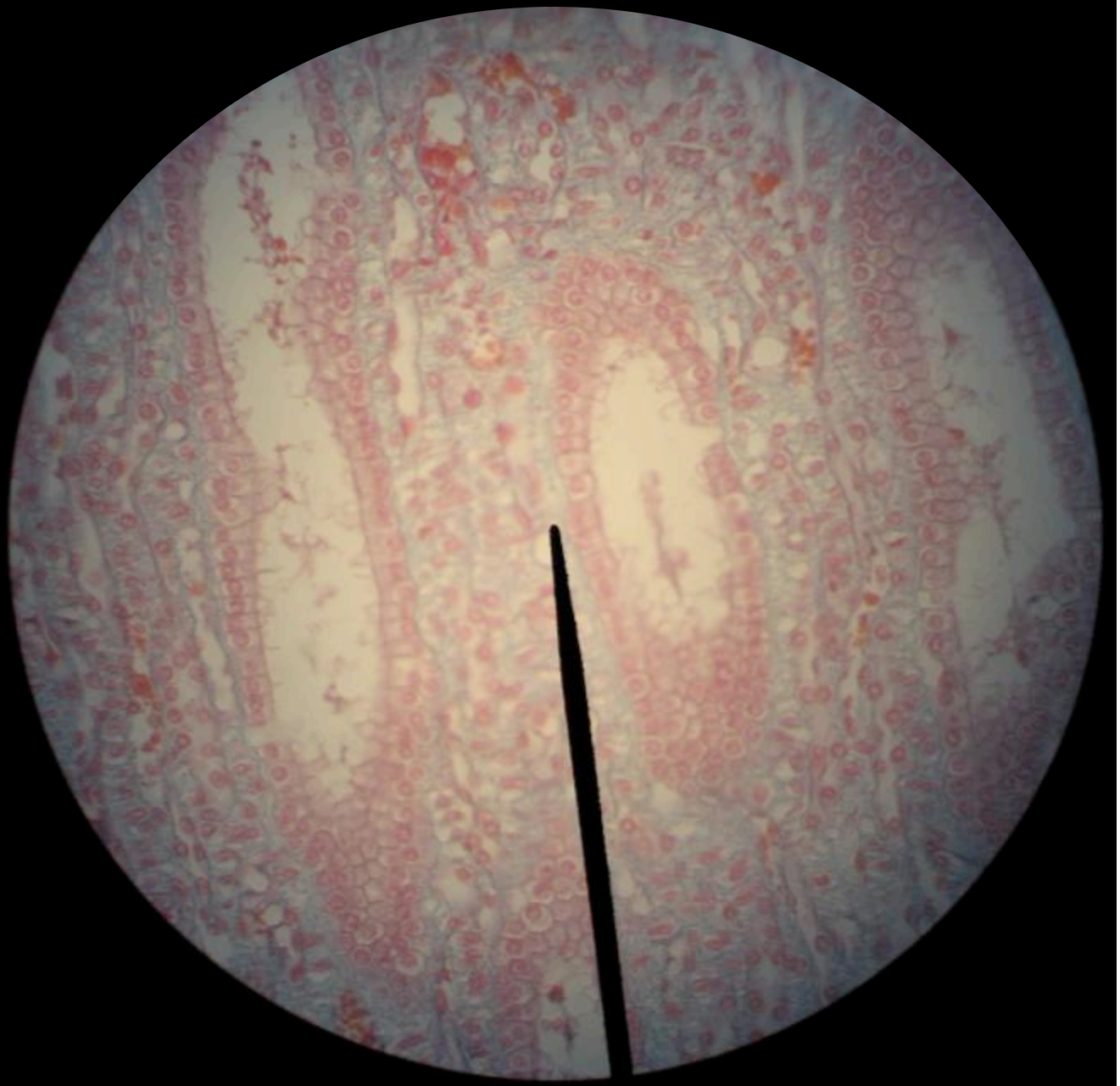
Name this tissue:

Simple Squamous



Name this tissue:

Simple Cuboidal

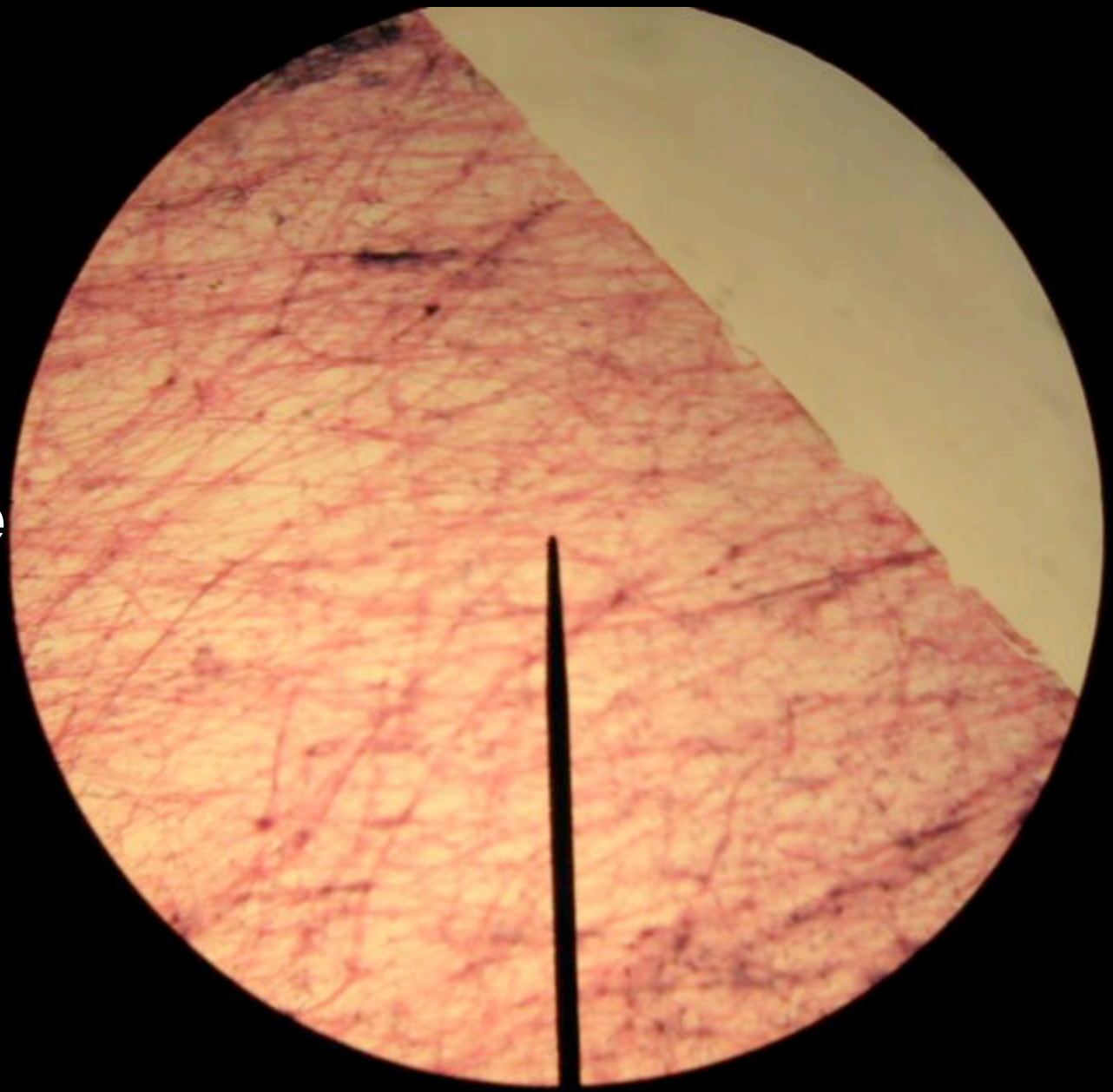


Name this tissue:

Stratified Columnar

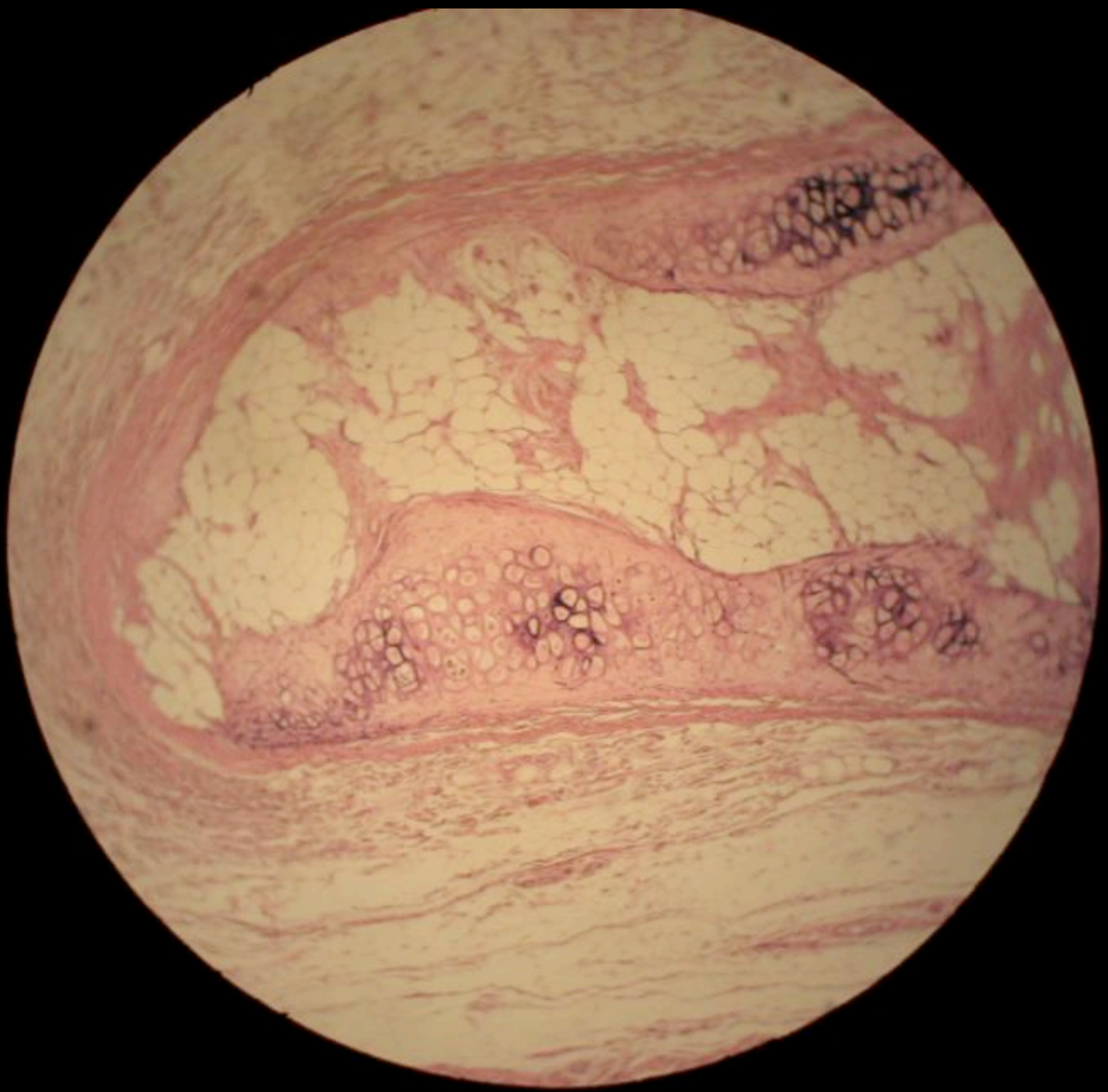
Name this tissue:

Loose connective tissue



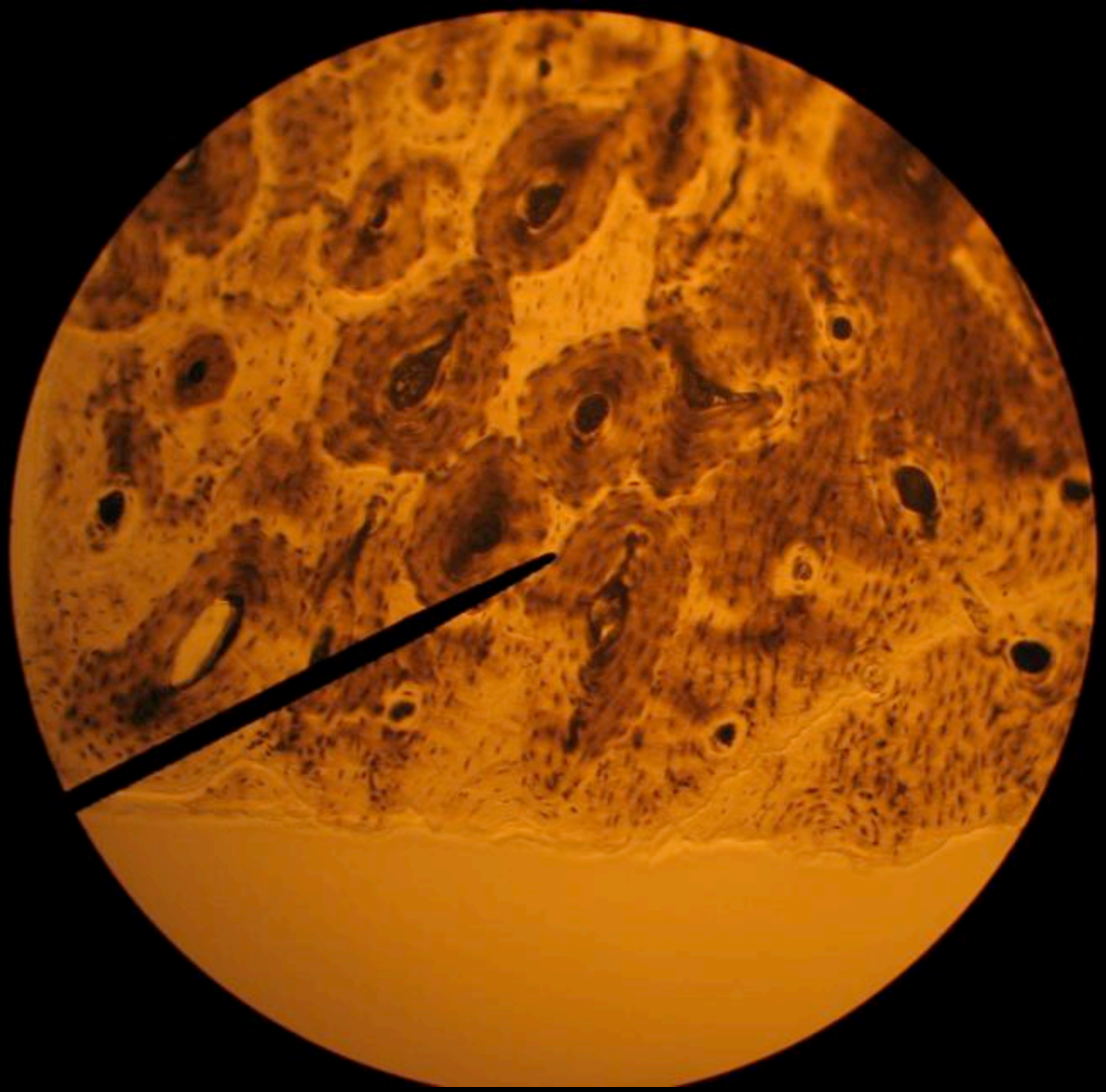
Name this tissue:

Cartilage



Name this tissue:

Bone

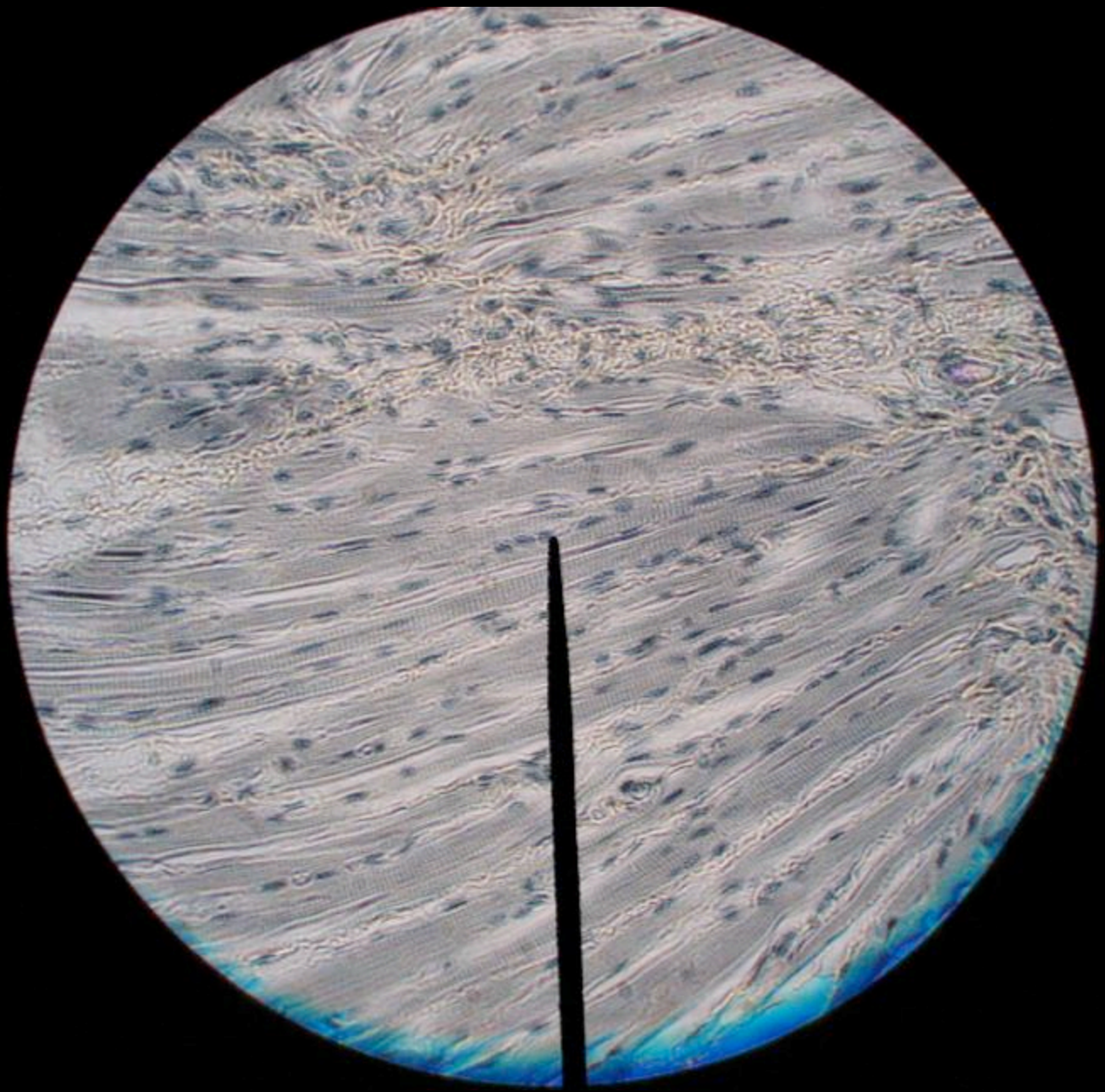


Name this tissue:

Adipose Tissue (Fat)

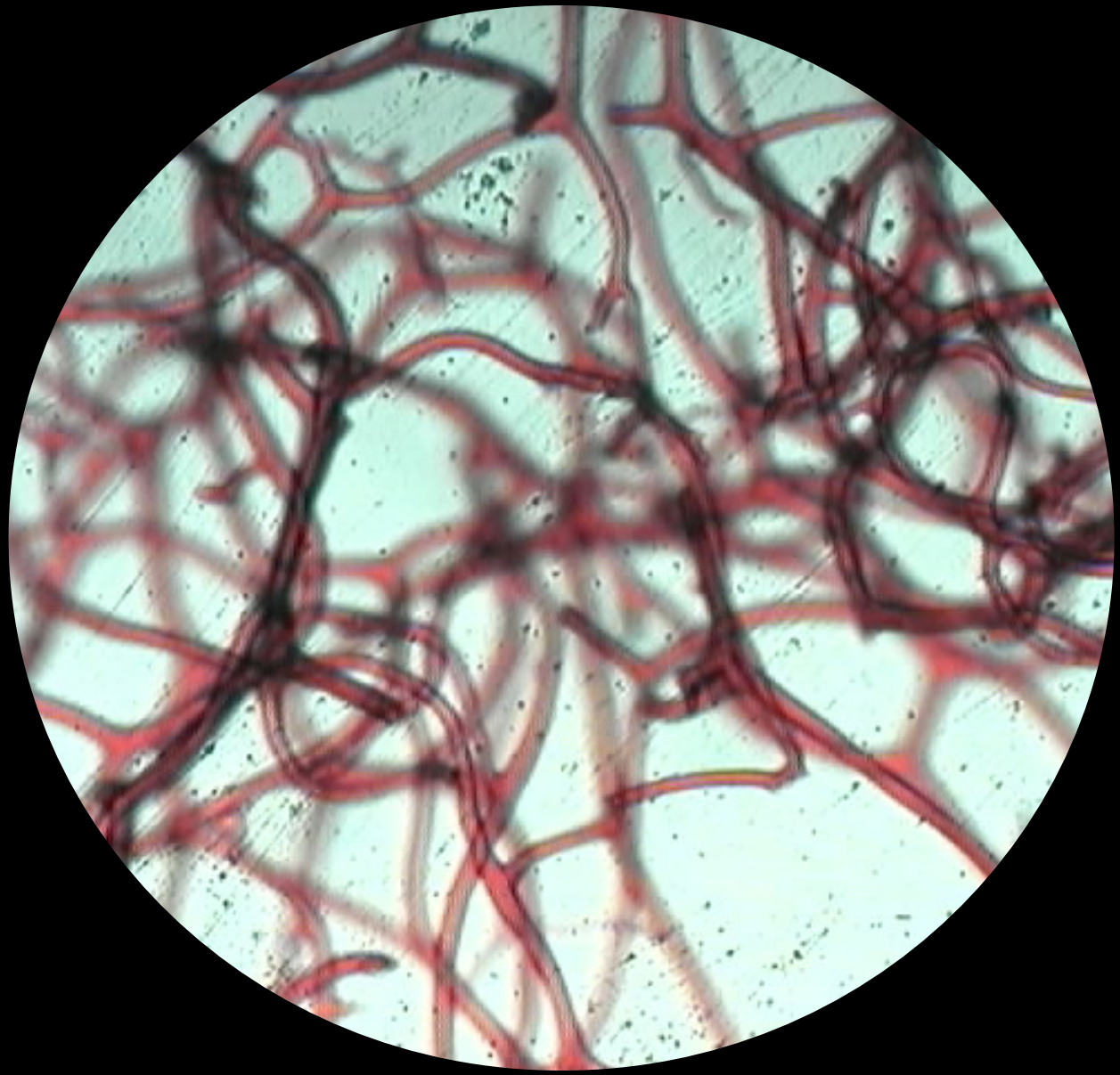
Name this tissue:

Skeletal Muscle



Name this cellular tissue:

Spongin



Name this cellular tissue:

Spicules

What is the movement of water through this sponge?

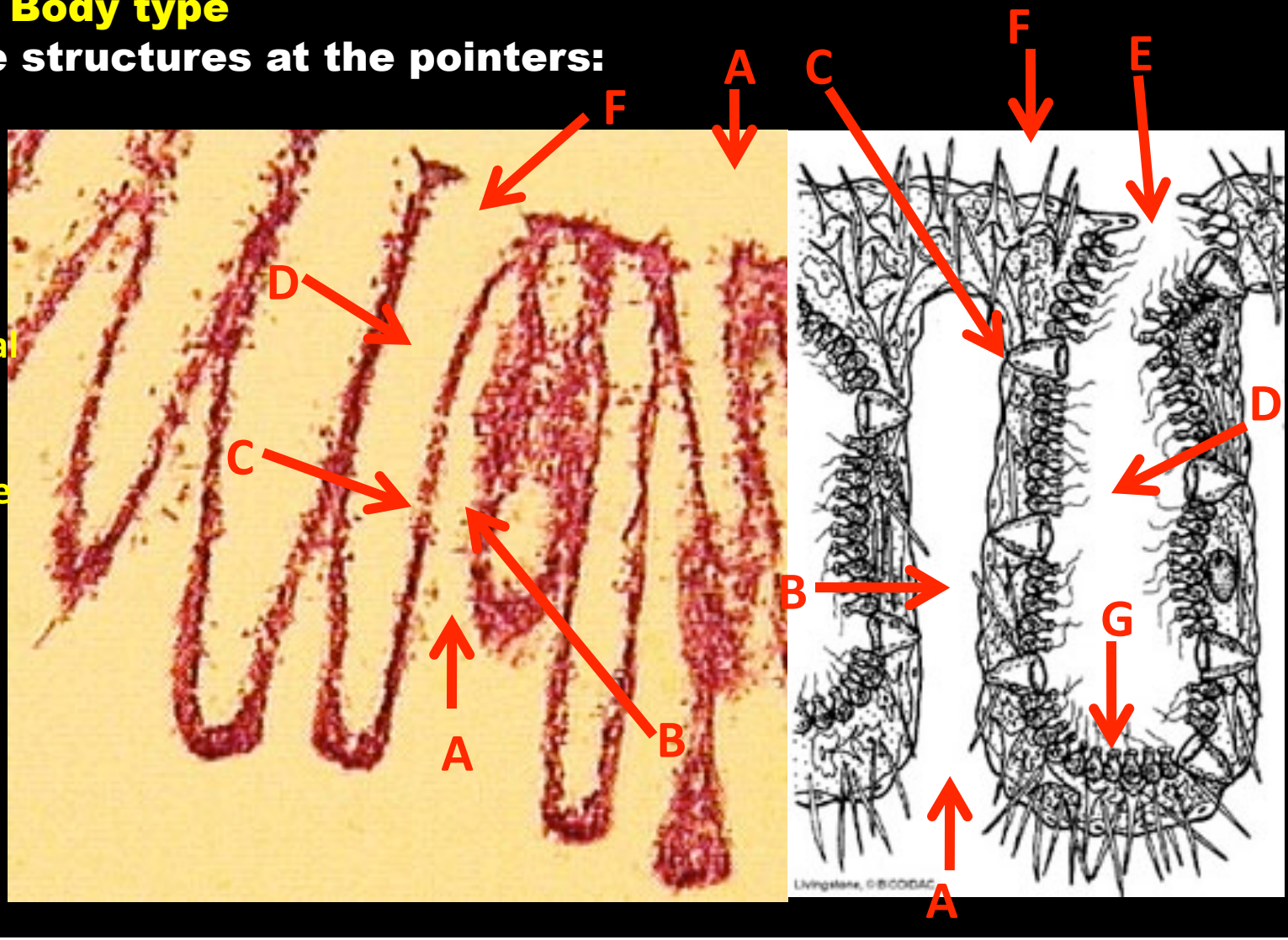
Ostia --- Incurrent Canal --- Prosopyle --- Radial Canal --- Apopyle --- Spongocoel --- Osculum

What type of sponge body type is this?

Syconoid Body type

Name the structures at the pointers:

A. Ostia
B. Incurrent Canal
C. Prosopyle
D. Radial Canal
E. Apopyle
F. Spongocoel
G. Choanocyte



What Phylum does this organism belong to?

Phylum Cnidaria

What Class does this organism belong to?

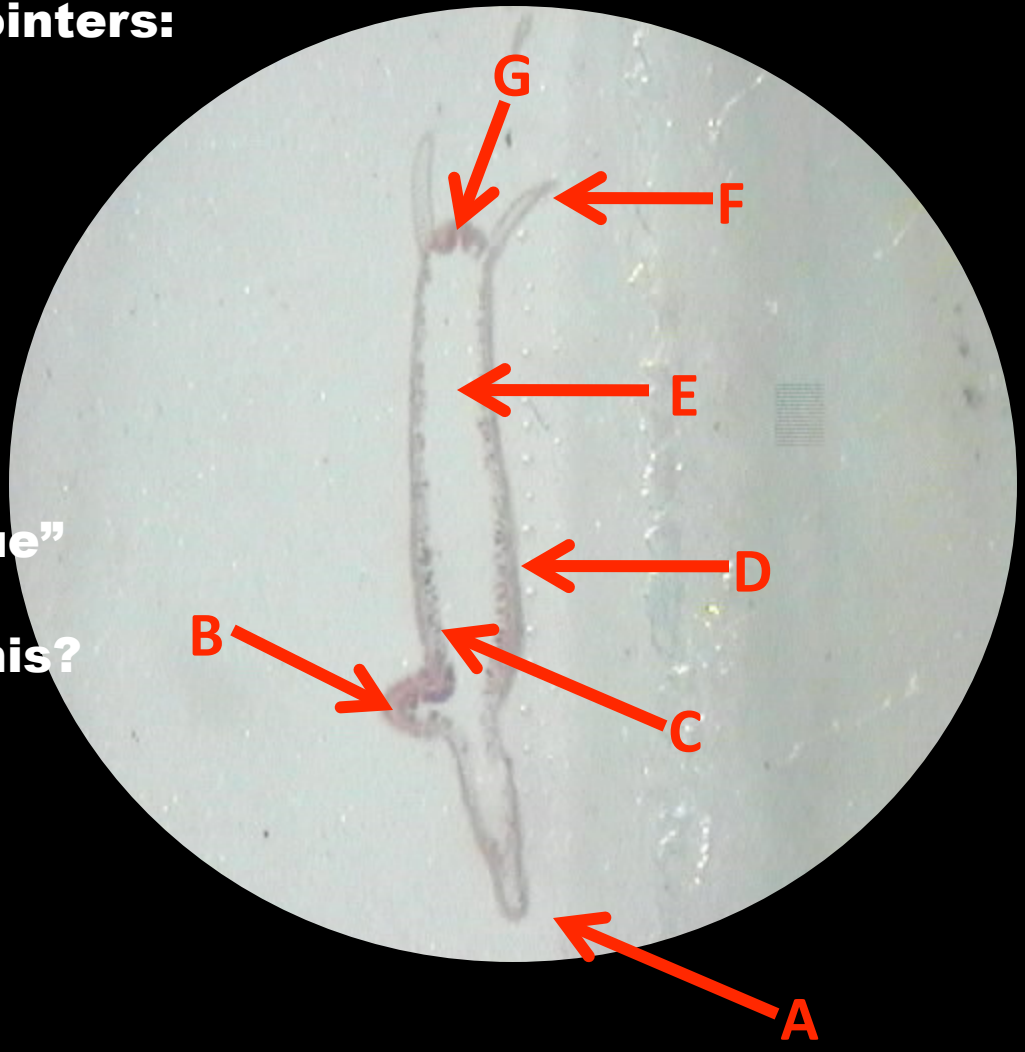
Class Hydrozoa

Name the structures at the pointers:

A. Basal Disc
B. Bud
C. Gastrodermis
D. Epidermis
E. Gastrovascular cavity
F. Tentacle
G. Mouth

What is the name of the "tissue" that is found between the epidermis and the gastrodermis?

Mesoglea



What Phylum does this organism belong to?

Phylum Cnidaria

What Class does this organism belong to?

Class Hydrazoa

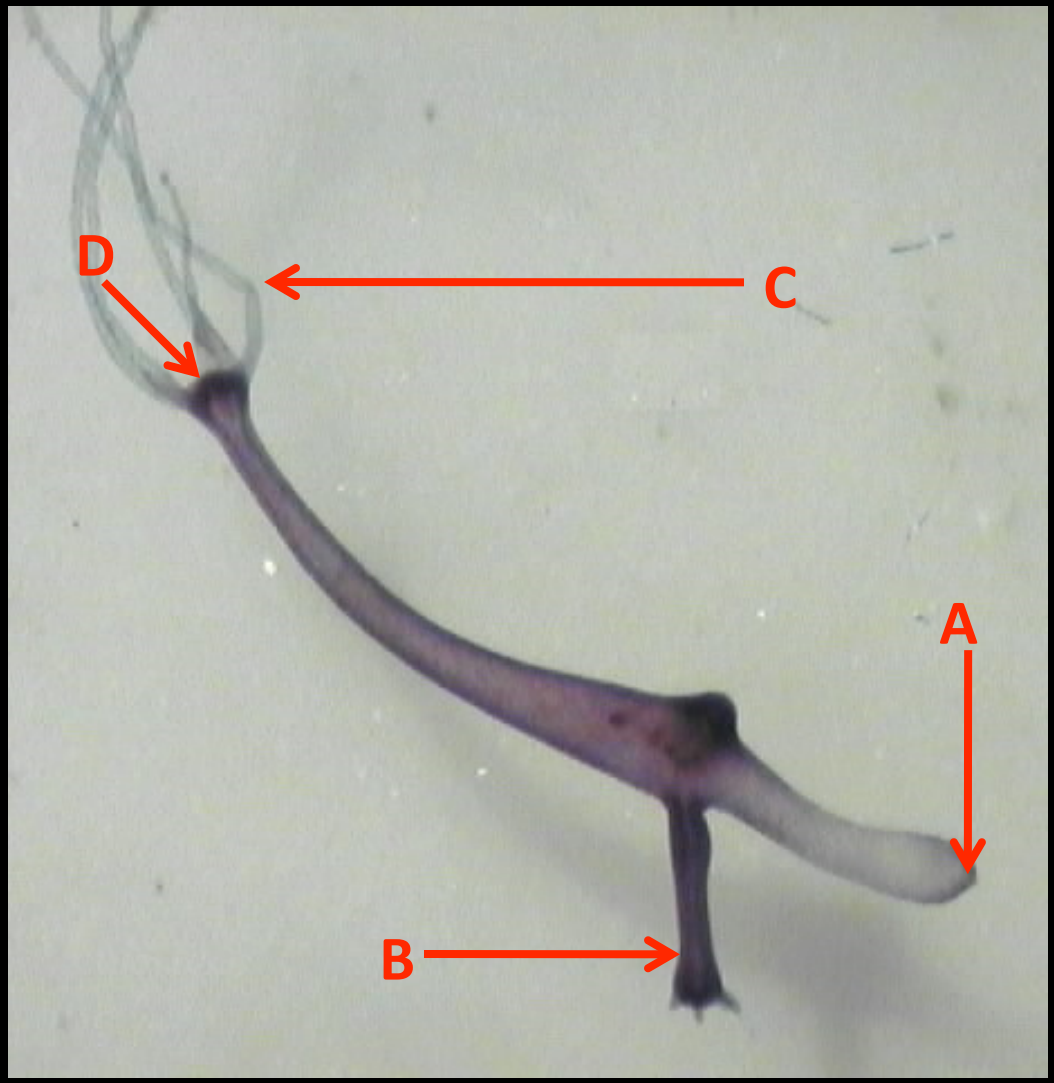
Name the structures at the pointers:

A: Basal Disc

B: Bud

C: Tentacles

D: Mouth



What Phylum does this organism belong to?

Phylum Cnidaria

What Class does this organism belong to?

Class Hydrozoa

Is this a male or a female?

Male

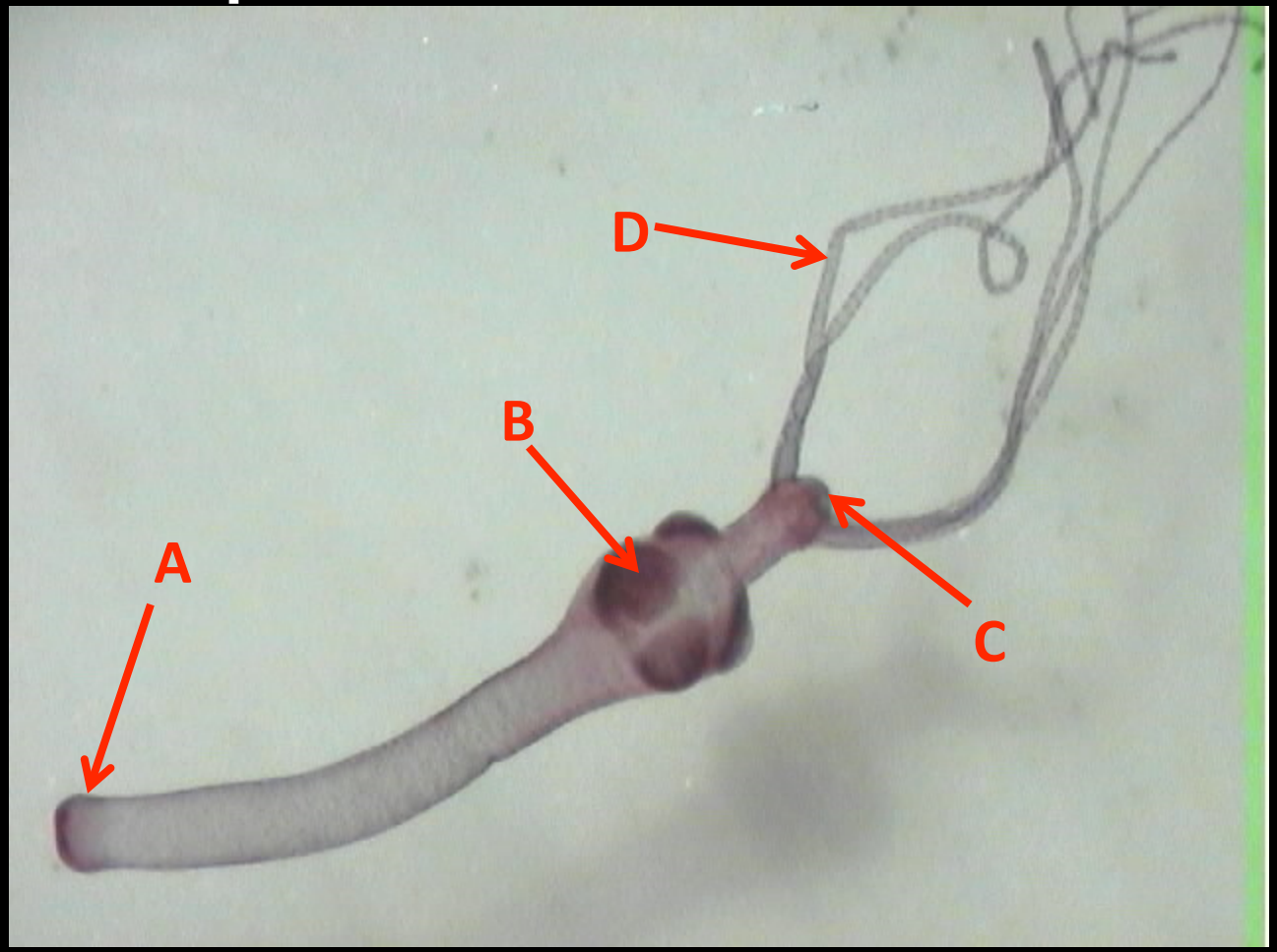
Name the structures at the pointers:

A: Basal Disc

B: Testes

C: Mouth

D: Tentacles



What Phylum does this organism belong to?

Phylum Cnidaria

What Class does this organism belong to?

Class Hydrozoa

Is this a male or a female?

Female

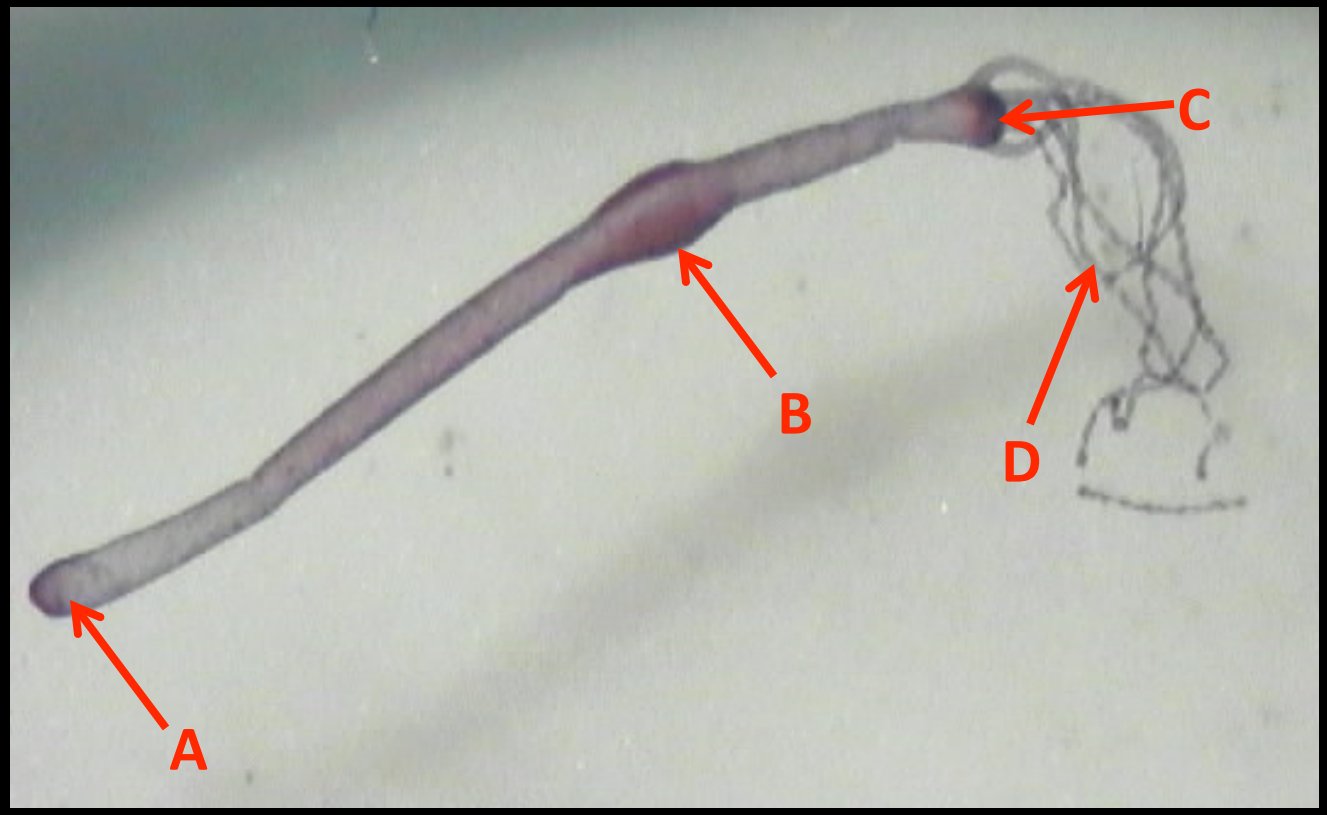
Name the structures at the pointers:

A: Basal Disc

B: Ovary

C: Mouth

D: Tentacles

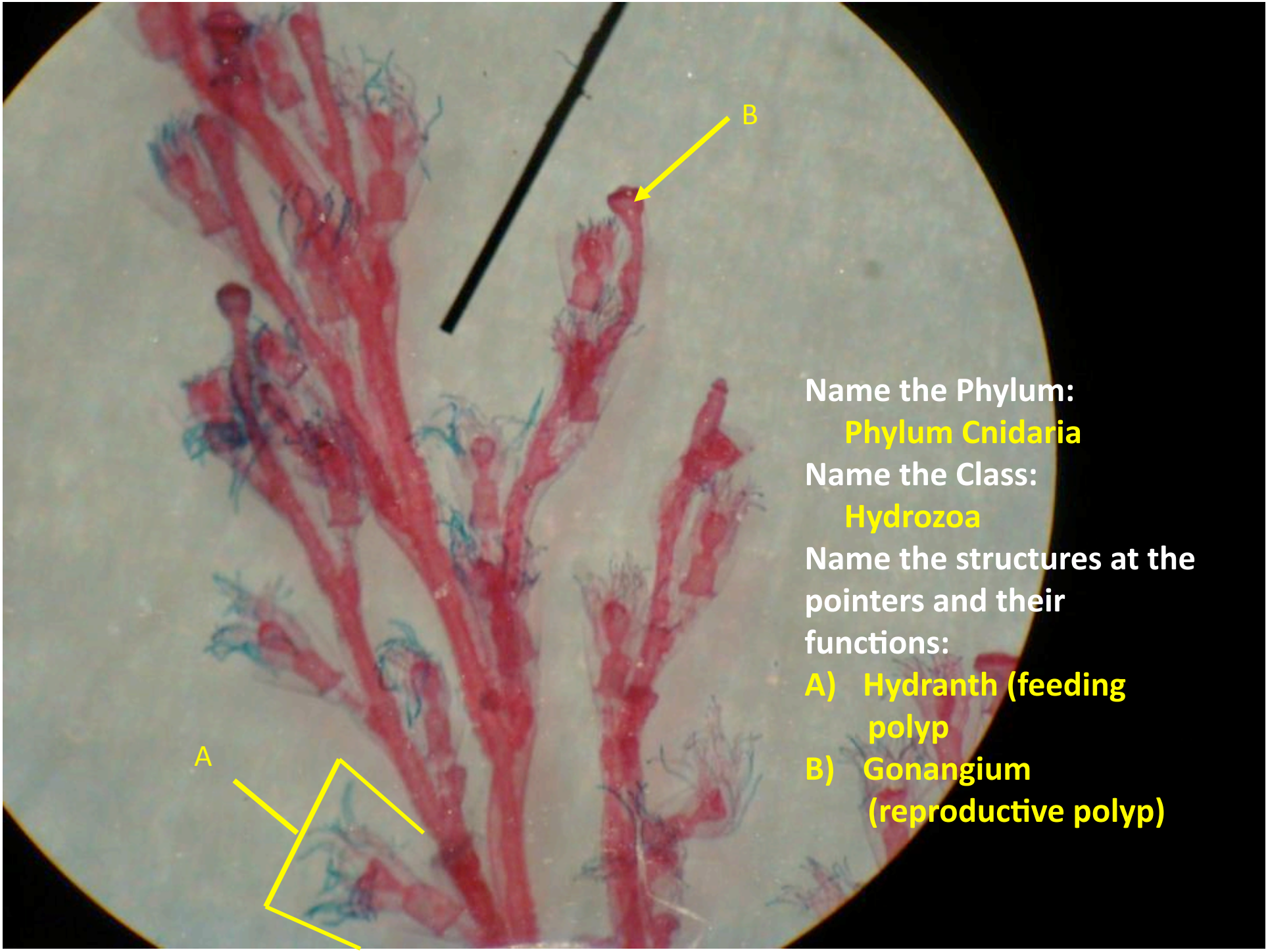


What is this structure called?
Hydranth
What is its function?
A polyp for feeding
In what Phylum is this structure found?
Phylum Cnidaria
In what Class is this structure found?
Class Hydrozoa

Found in the colonial Hydra called "Obelia"

What is this structure called?
Gonangium
What is its function?
A polyp for reproduction
In what Phylum is this structure found?
Phylum Cnidaria
In what Class is this structure found?
Class Hydrozoa

Found in the colonial Hydra called "Obelia"



Name the Phylum:
Phylum Cnidaria
Name the Class:
Hydrozoa
Name the structures at the pointers and their functions:
A) Hydranth (feeding polyp
B) Gonangium (reproductive polyp)

What Phylum does this organism belong to?

Phylum Cnidaria

What Class does this organism belong to?

Class Hydrazoa

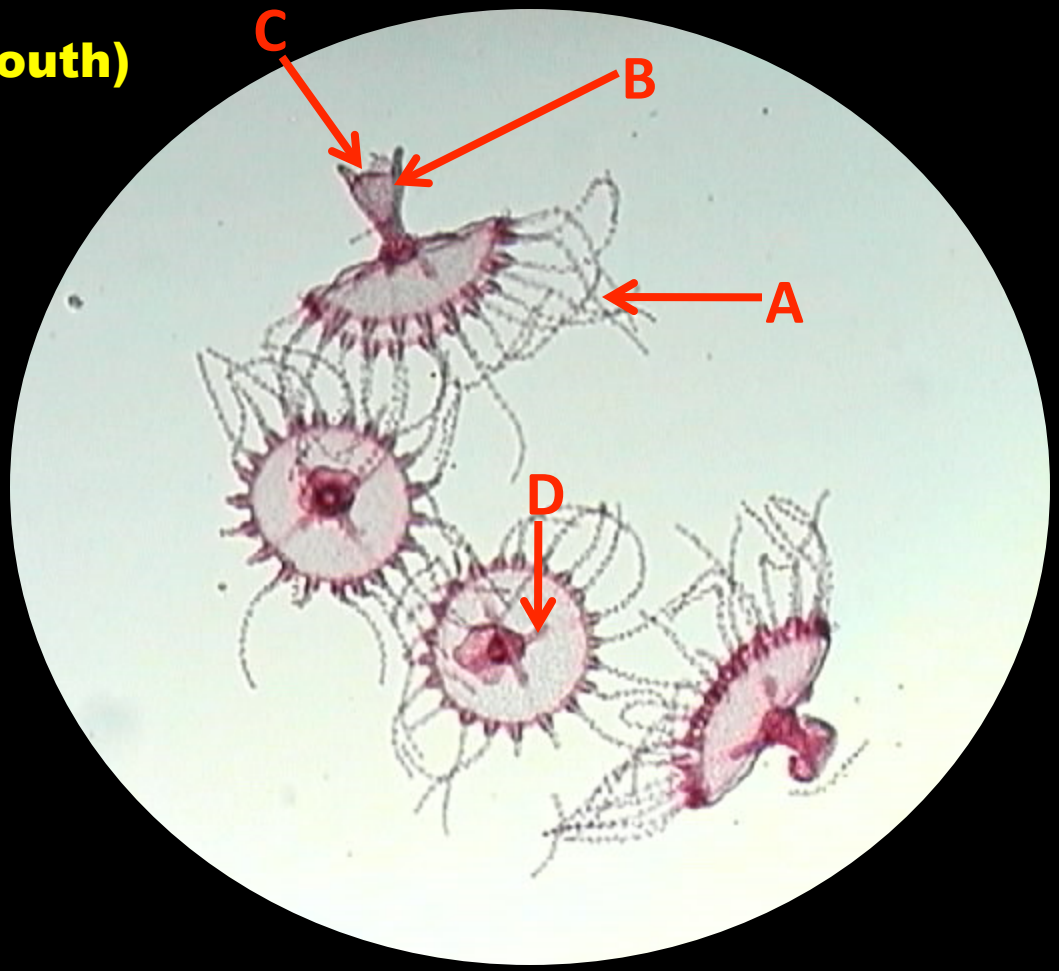
Name the structures at the pointers:

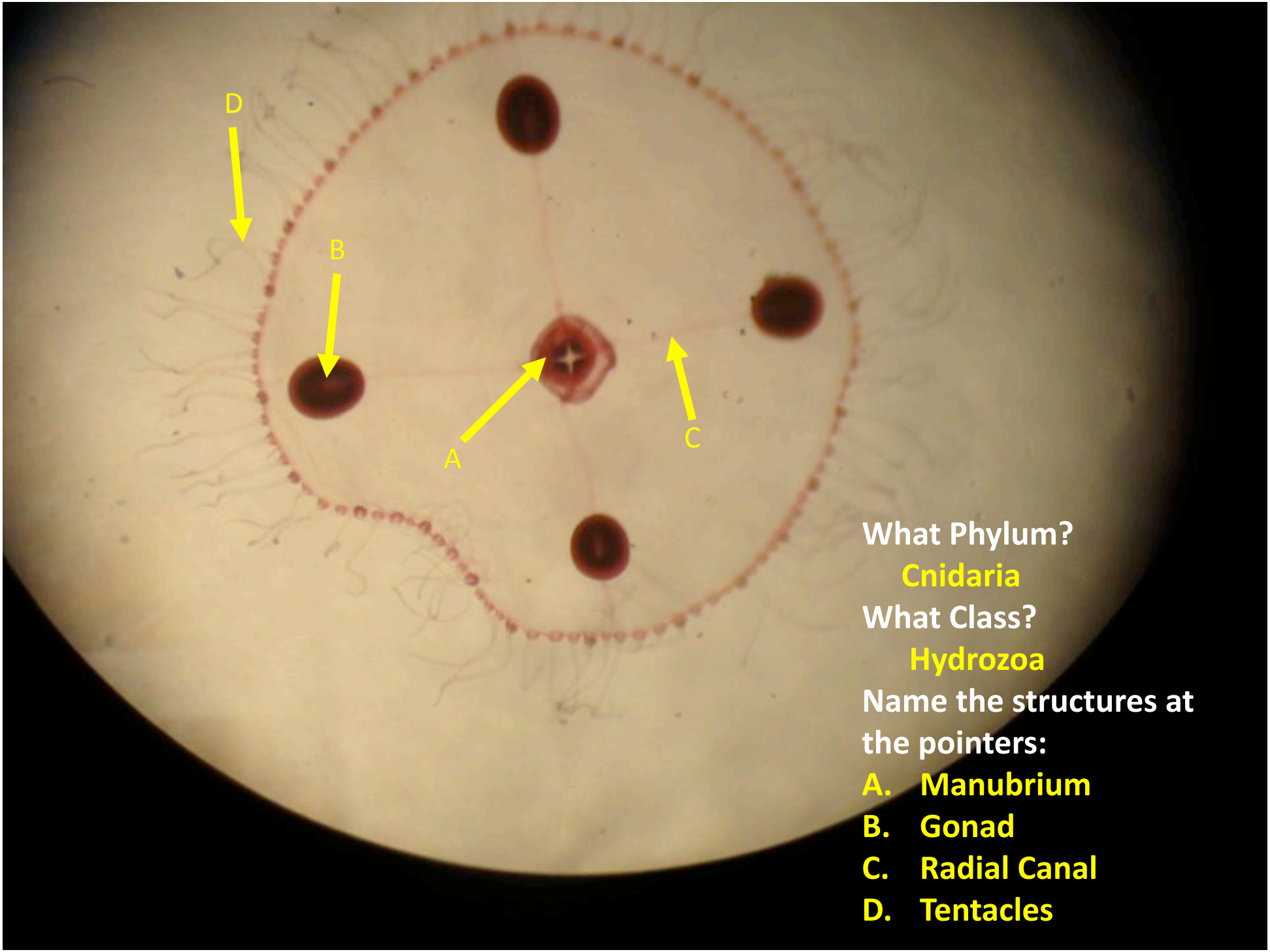
A. Tentacles

B. Manubrium (houses the mouth)

C. Mouth

D. Radial Canals





What Phylum?

Cnidaria

What Class?

Hydrozoa

Name the structures at the pointers:

A. Manubrium
B. Gonad
C. Radial Canal
D. Tentacles

What Phylum does this organism belong to?

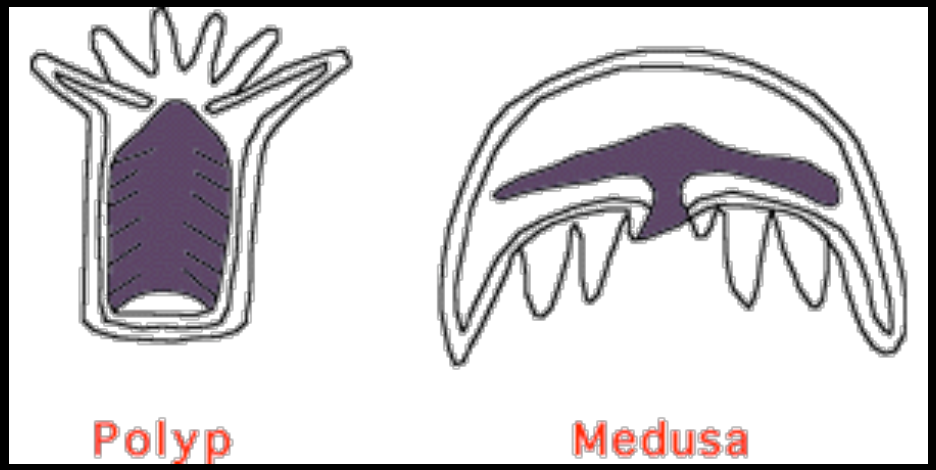
Phylum Cnidaria

What Class does this organism belong to?

Class Scyphozoa

Review:

The **"Mesoglea"** found in Phylum Cnidaria is not a tissue layer. It is an internal secretion of the epidermis. It is a thin layer that separates the Epidermis from the Gastrodermis.

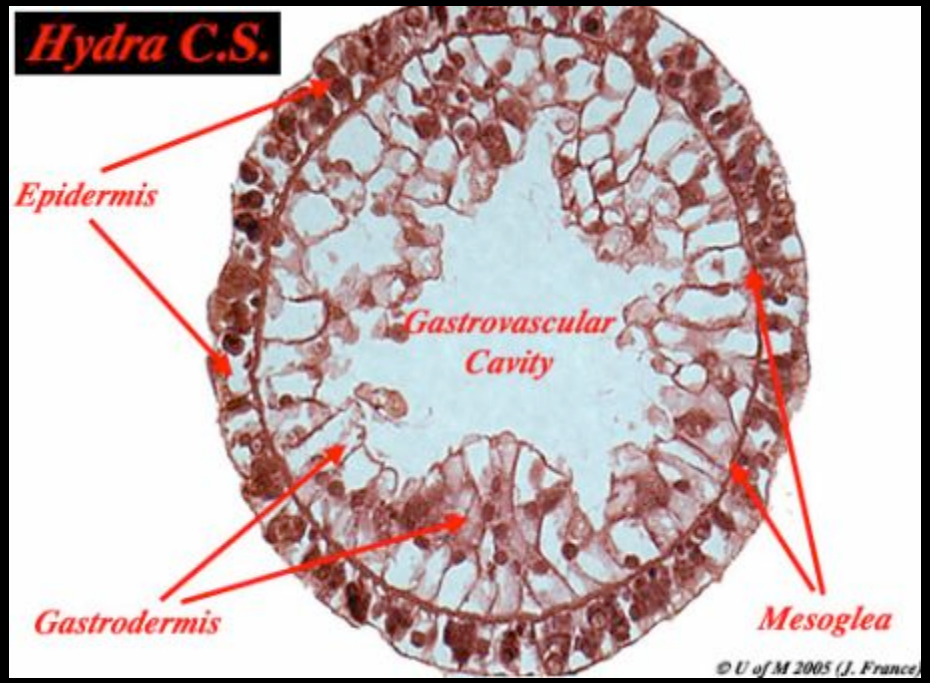


The **Polyp** form of Cnidarians have tentacles that point upward. The Medusa form of Cnidarians have tentacles that point downward.

Hydrozoans can be either polyp or medusa.

Scyphozoans are usually medusa.

Anthozoans are usually polyp.



What Phylum does this organism belong to?

Phylum Platyhelminthes

What Class does this organism belong to?

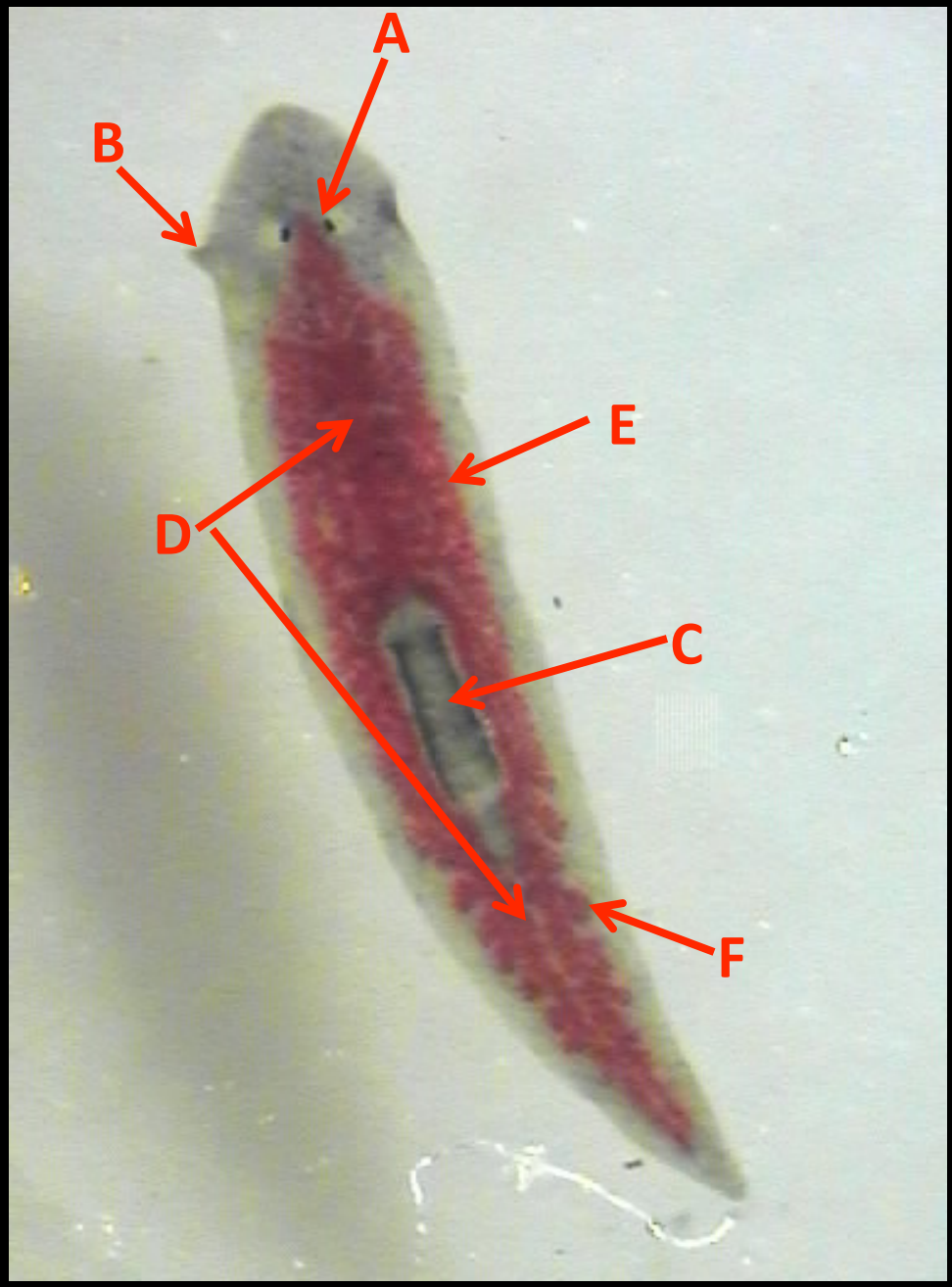
Class Turbellaria

What type of body cavity does this organism have?

Acoelomate body cavity

Name the structures at the pointers:

A: Eyespots
B: Auricles
C: Pharynx
D: Gastrovascular Cavity
E: Anterior intestinal Cavity
F: Posterior intestinal Cavity



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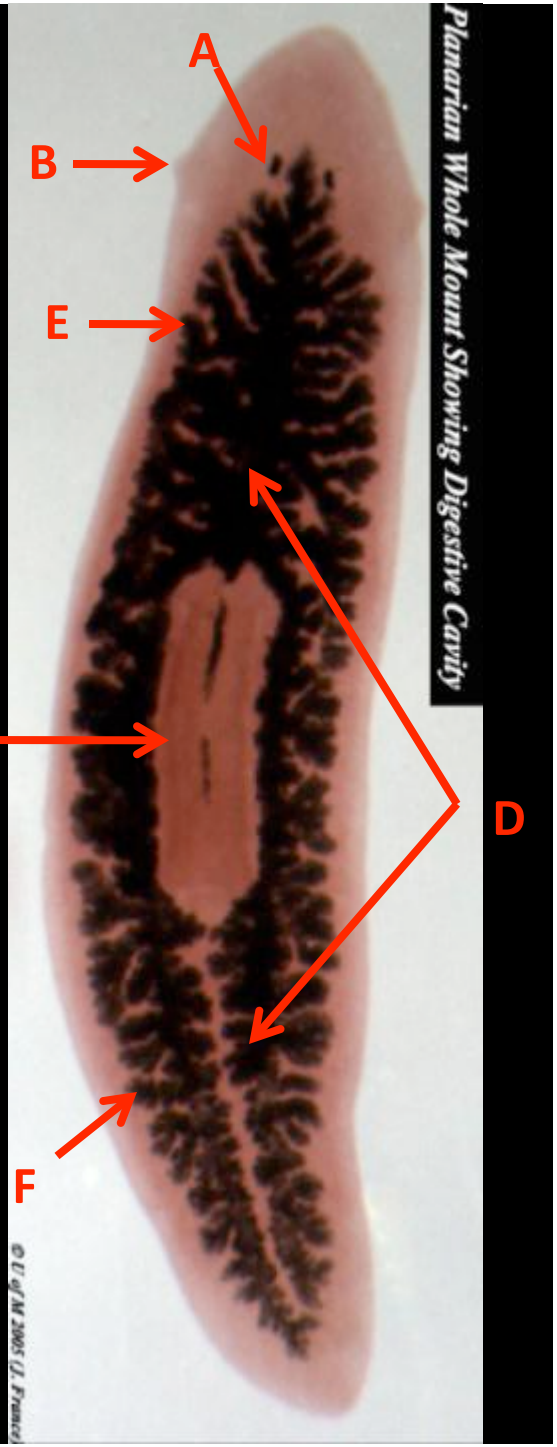
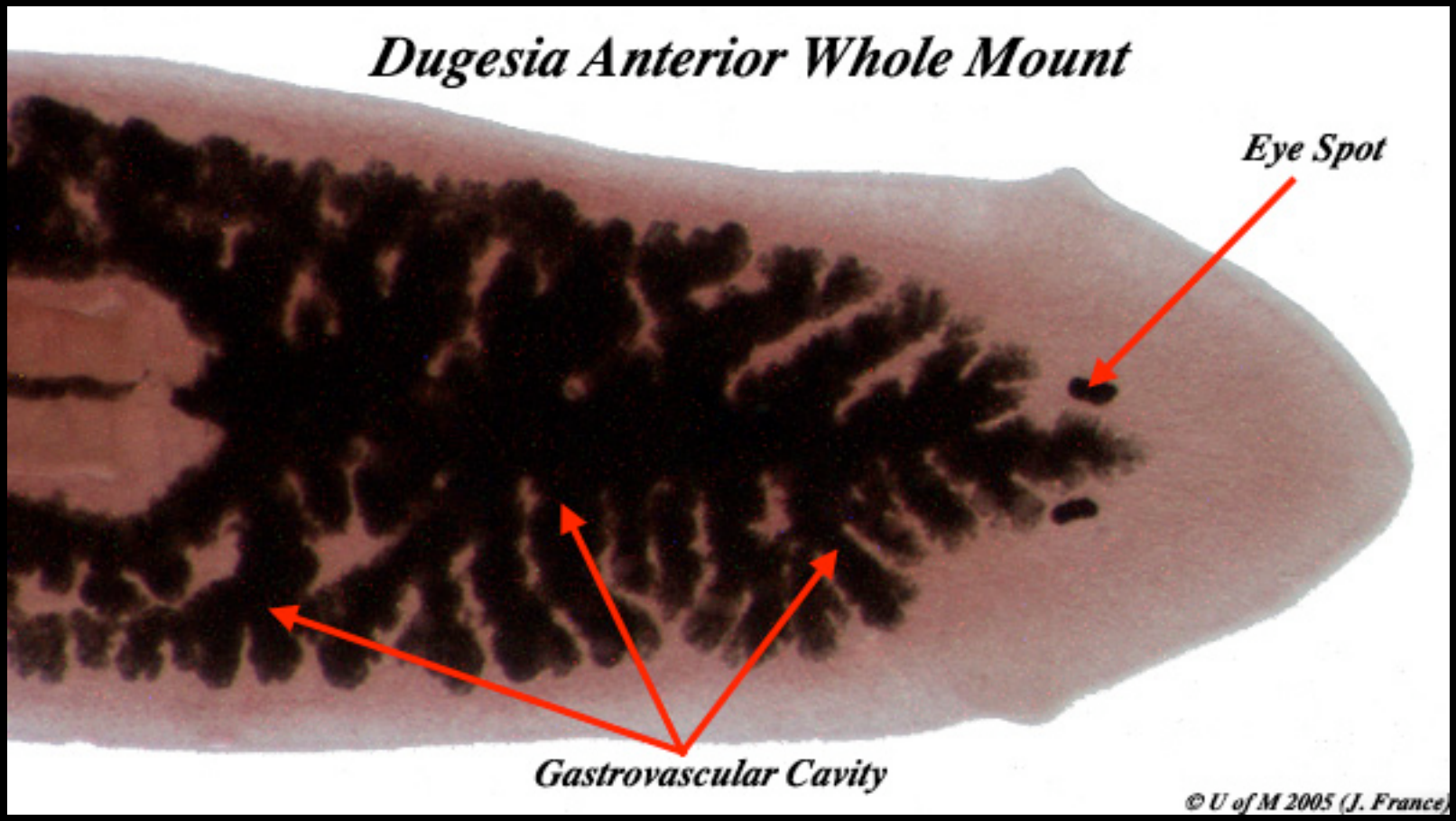
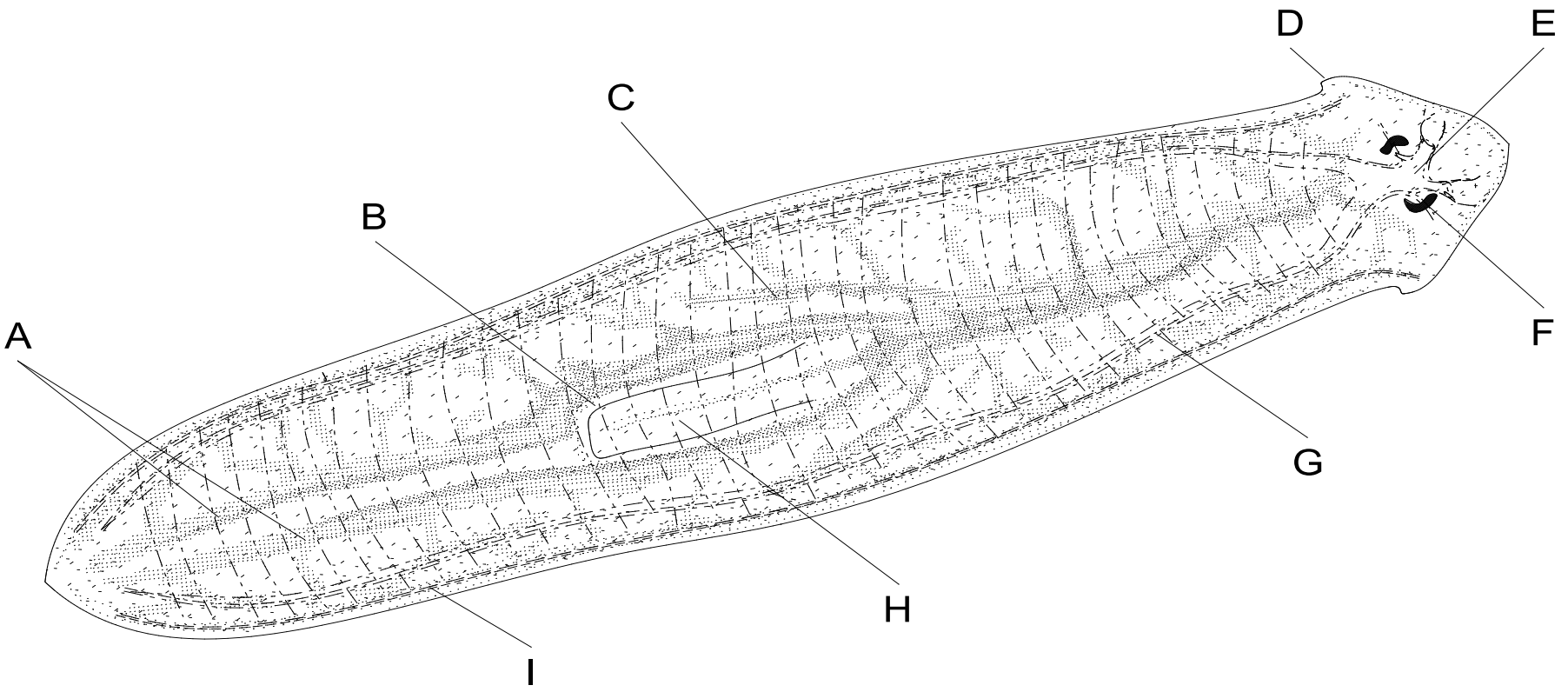



Dugesia Anterior Whole Mount
Eye Spot
Gastrovascular Cavity
© U of M 2005 (J. France)



A) GASTROVASCULAR CAVITY
B) BUCCAL CAVITY
C) DIVERTICULUM
D) AURICLE
E) BRAIN
F) EYESPOT
G) NERVE CORD
H) PHARYNIX
I) EXCRETORY SYSTEM

To what Phylum and Class does this cross section belong?

Phylum Platyhelminthes, Class Turbellaria

What Region is this a cross section of?

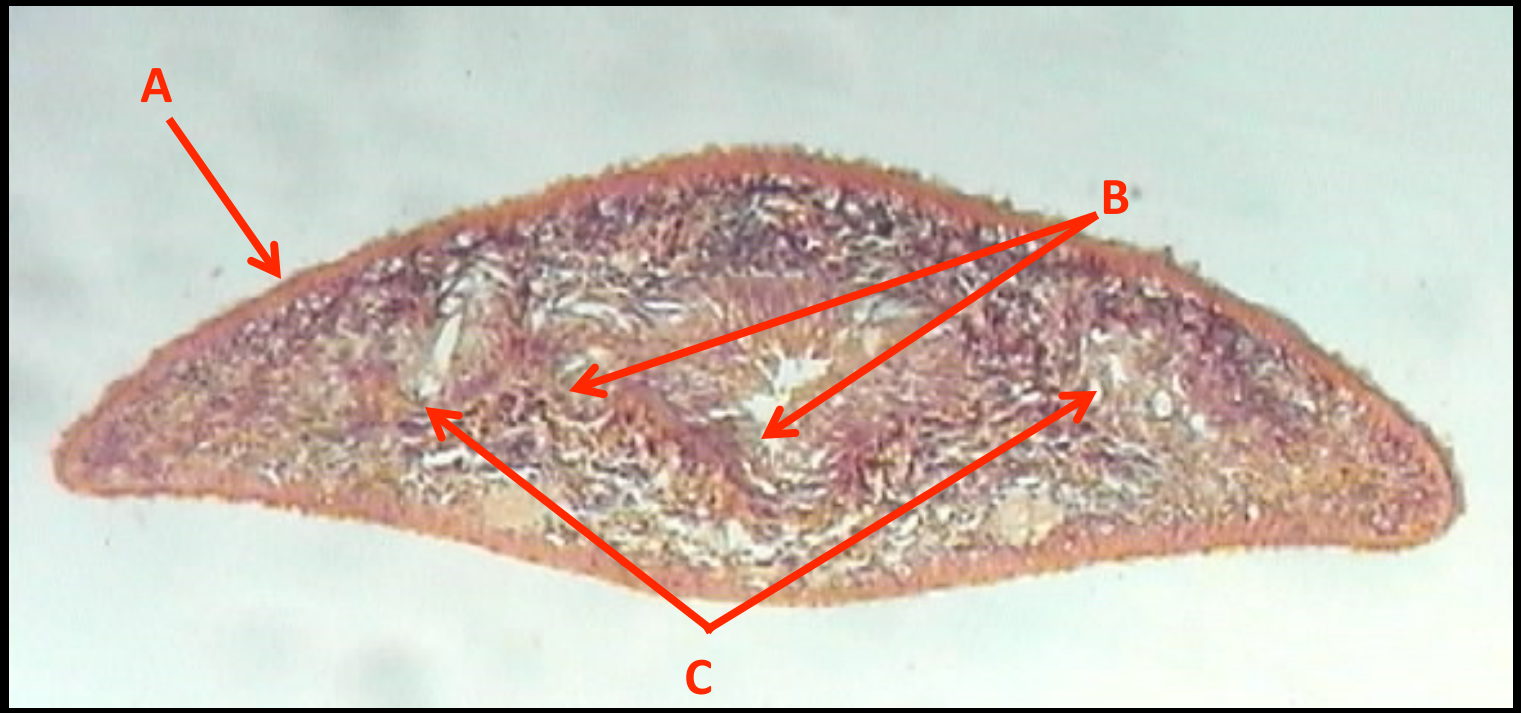
The Anterior Region

Name the structures at the pointers:

A: Epidermis

B: Gastrodermis

C: Anterior Branches of the Intestine



To what Phylum and Class does this cross section belong?

Phylum Platyhelminthes, Class Turbellaria

What Region is this a cross section of?

The Pharyngeal Region

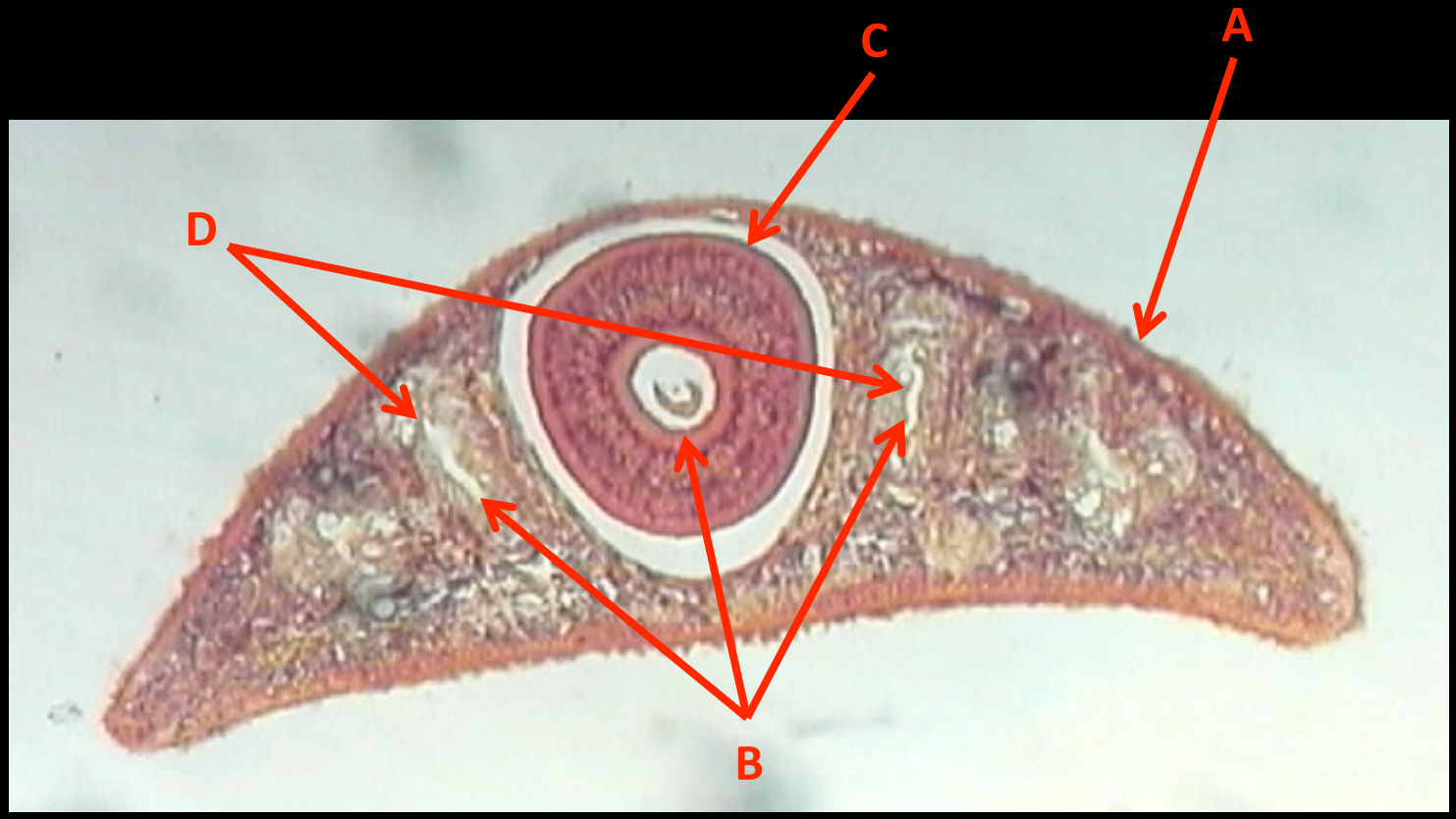
Name the structures at the pointers:

A: Epidermis

B: Gastrodermis

C: Pharynx

D: Branches of the Intestine



To what Phylum and Class does this cross section belong?

Phylum Platyhelminthes, Class Turbellaria

What Region is this a cross section of?

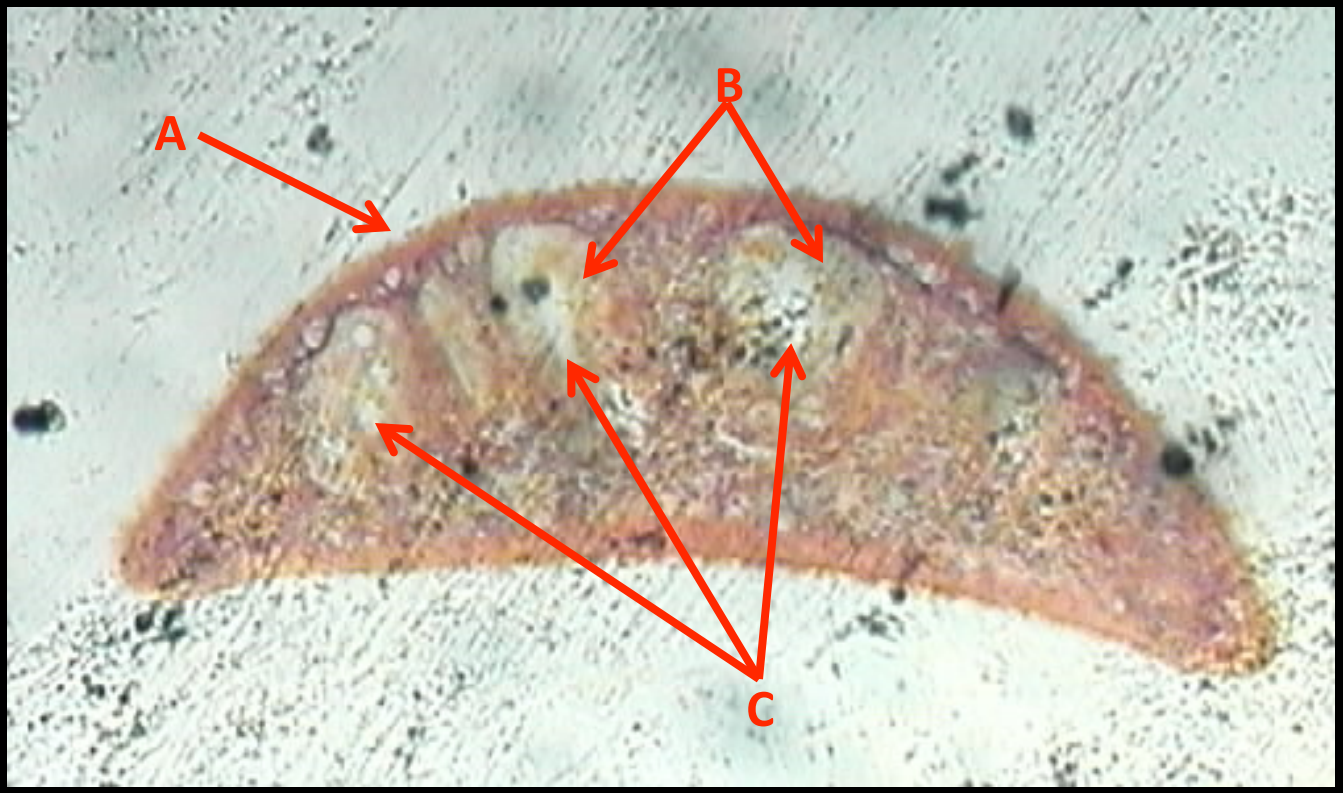
The Posterior Region

Name the structures at the pointers:

A: Epidermis

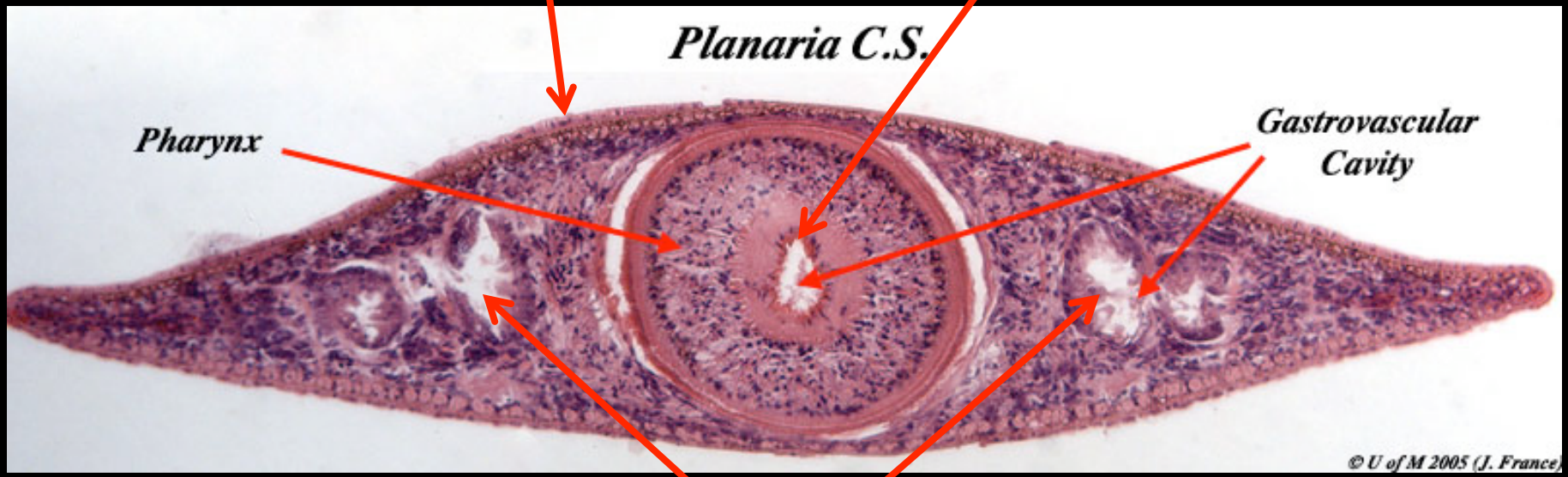
B: Gastrodermis

C: Posterior Branches of the Intestine

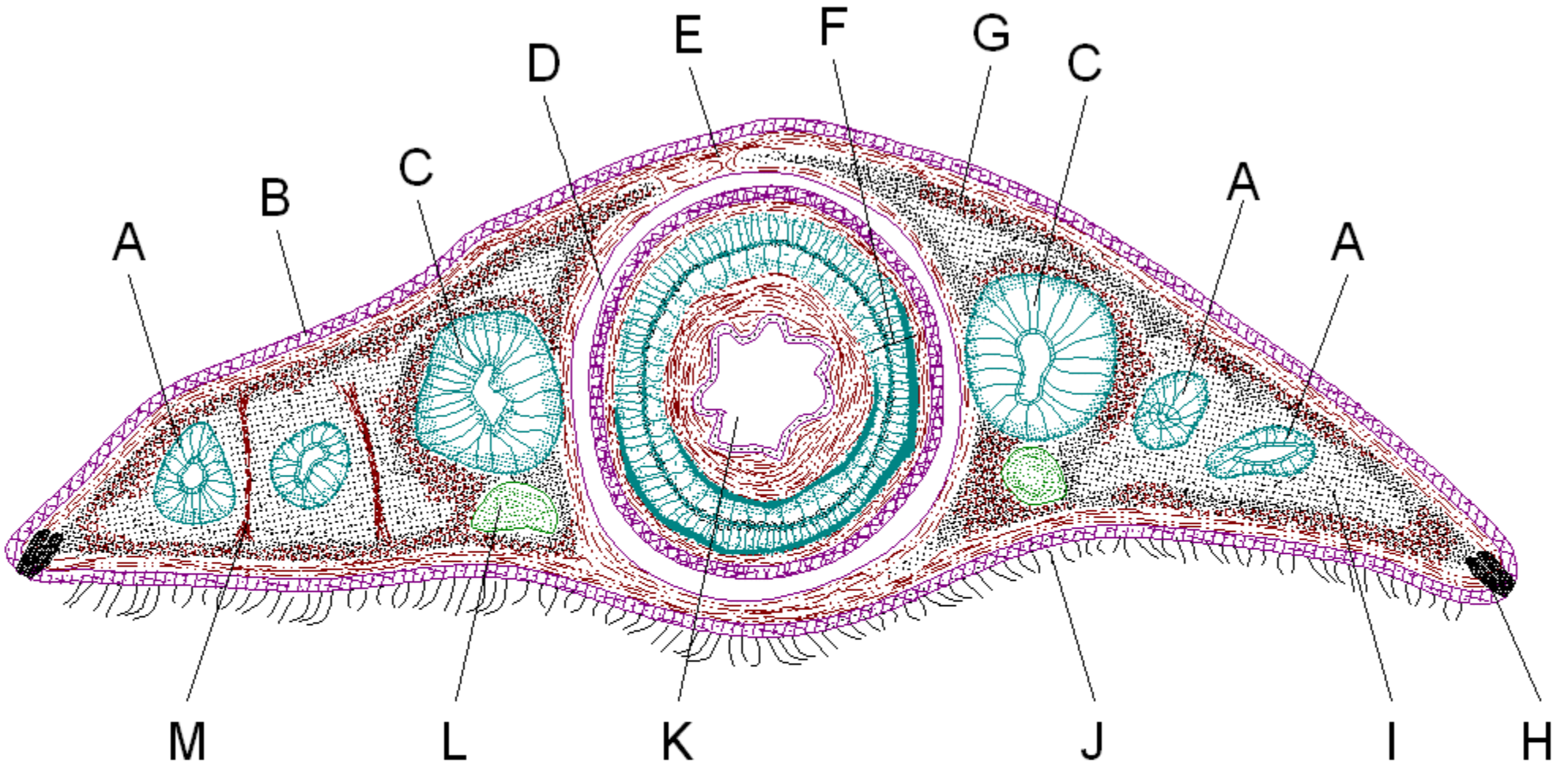


Epidermis

Gastrodermis



Intestinal Branches



A) DIVERTICULUM
B) EPIDERMIS
C) GASTROVASCULAR CAVITY
D) BUCCAL CAVITY
E) CIRCULAR MUSCLE
F) GLANDULAR TISSUE
G) LONGITUDINAL MUSCLE
H) ADHESIVE GLAND
I) PARENCHYMA
J) CILIA
K) LUMEN OF PHARYNX
L) NERVE CORD
M) VERTICAL MUSCLE

What Phylum does this organism belong to?

Phylum Platyhelminthes

What Class does this organism belong to?

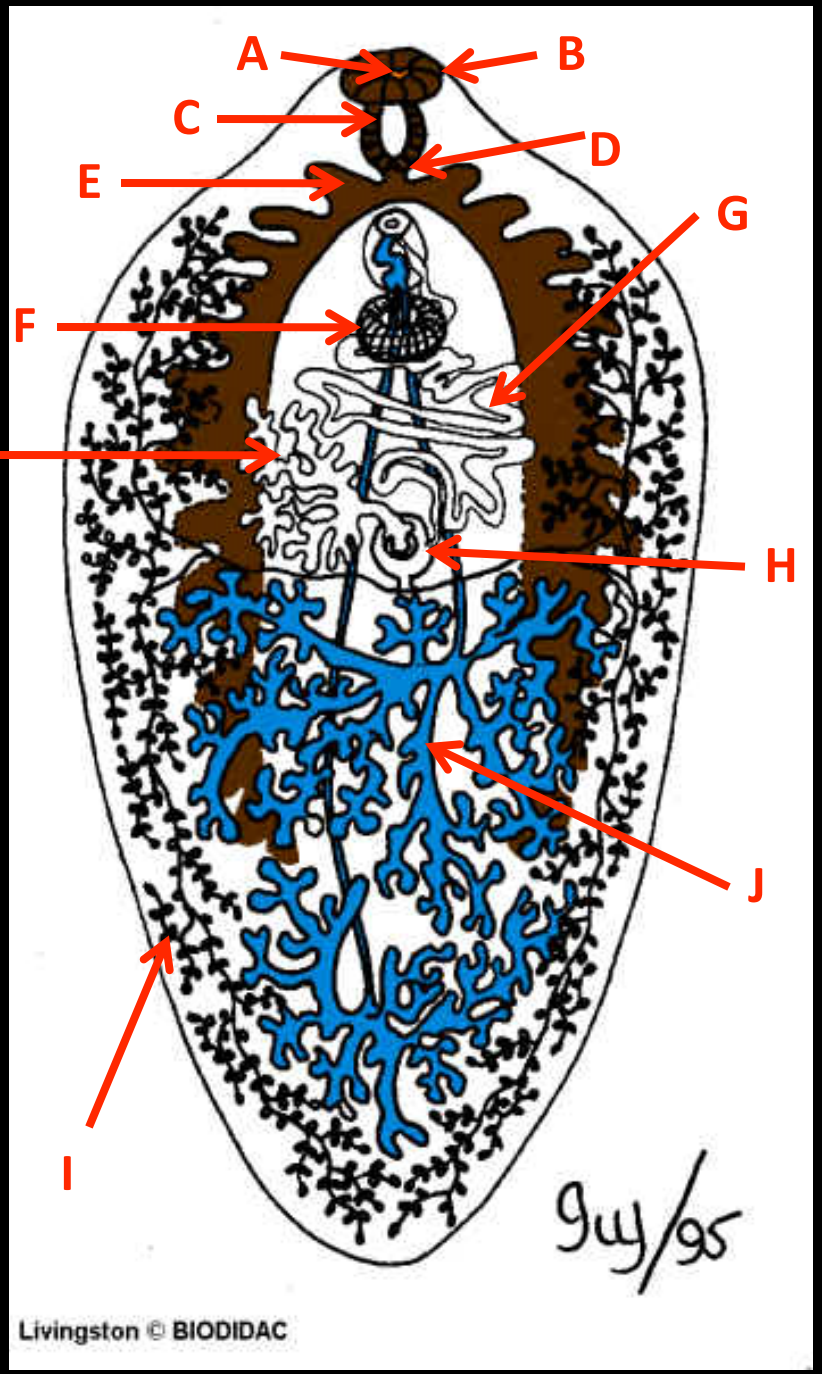
Class Trematoda

What kind of body cavity does this organism have?

Acoelomate

Name the structures at the pointers:

A: Mouth
B: Oral Sucker
C: Pharynx
D: Esophagus
E: Intestine
F: Ventral Sucker
G: Uterus with eggs
H: Shell Gland
I: Yolk Gland
J: Testis
K: Ovary



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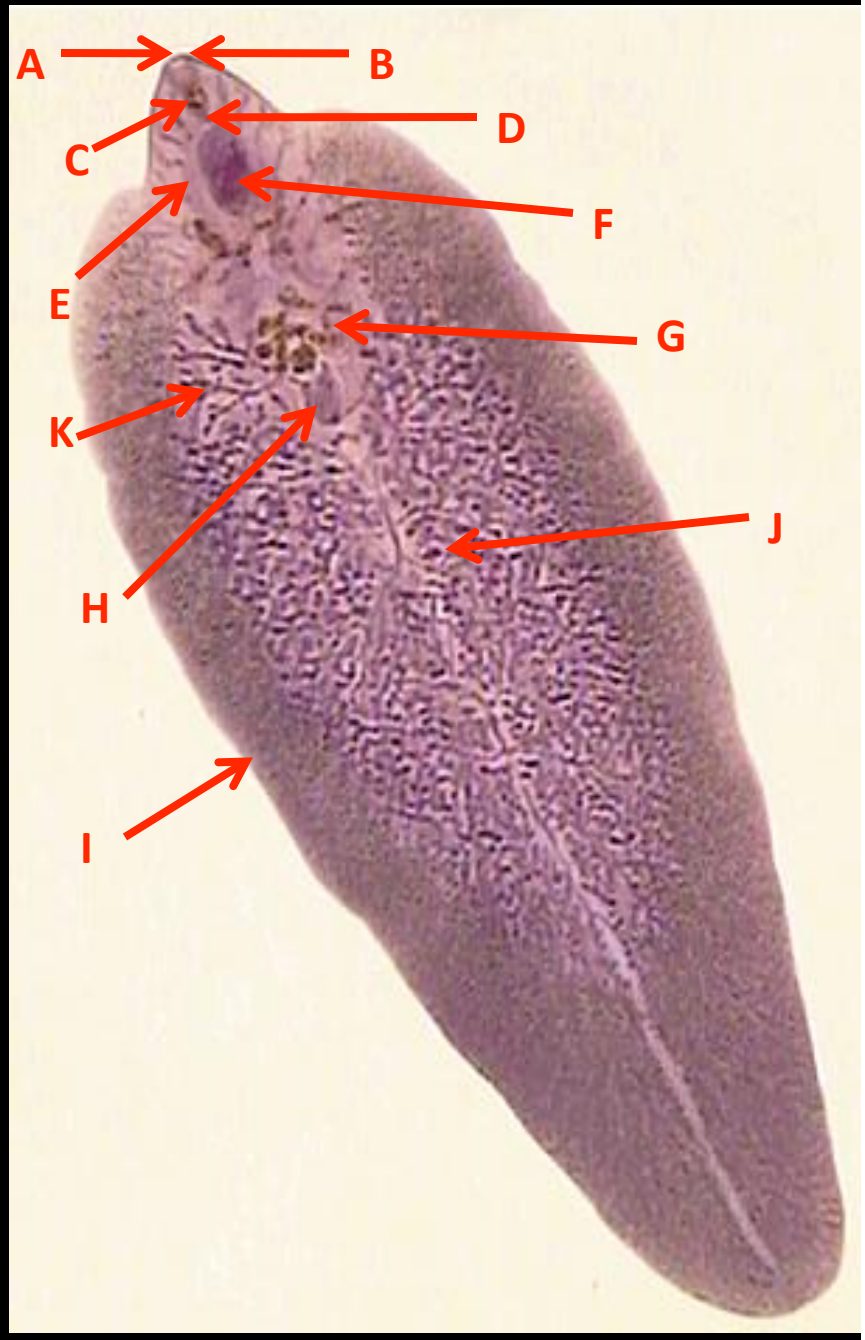

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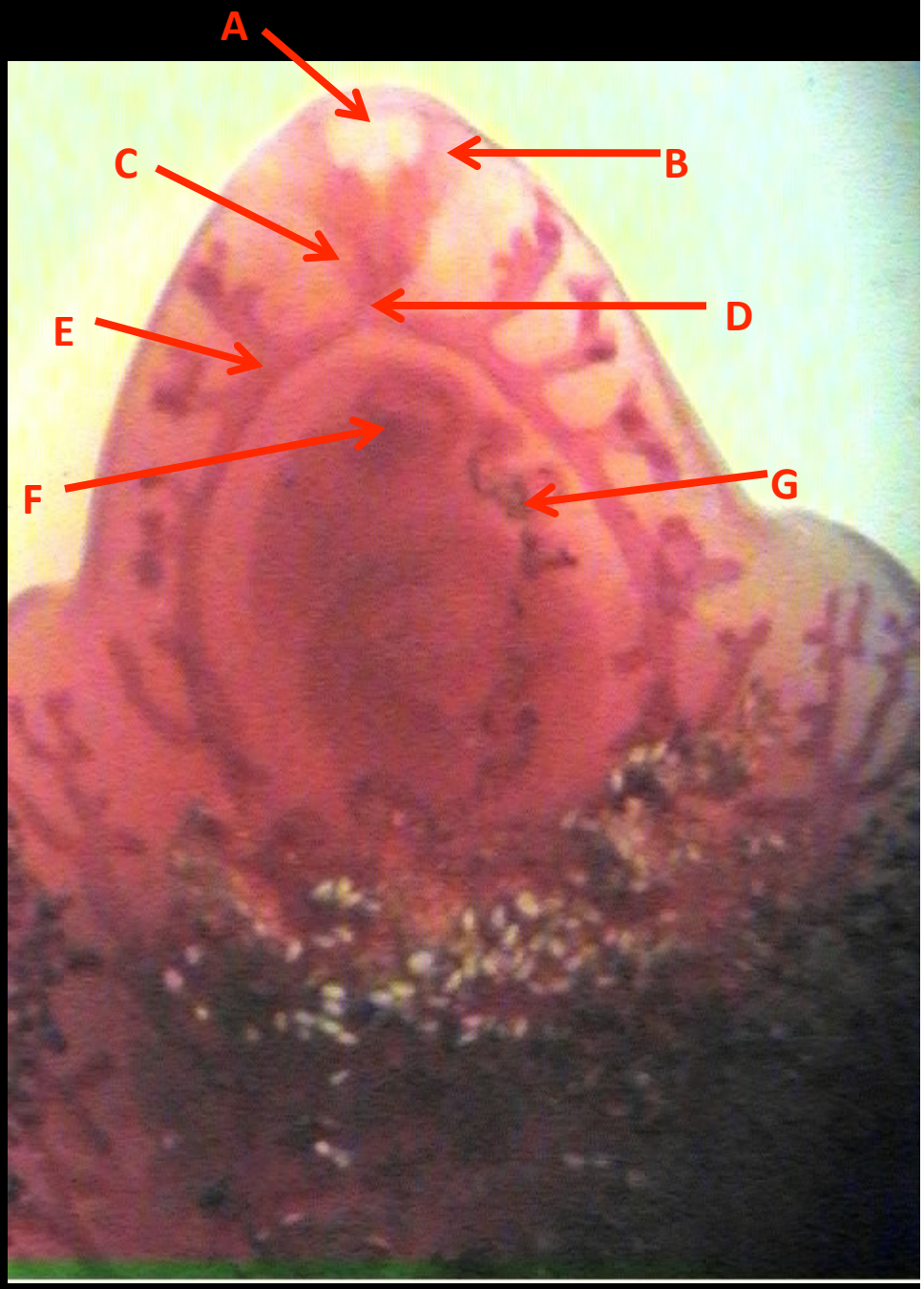

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C: Yolk Gland

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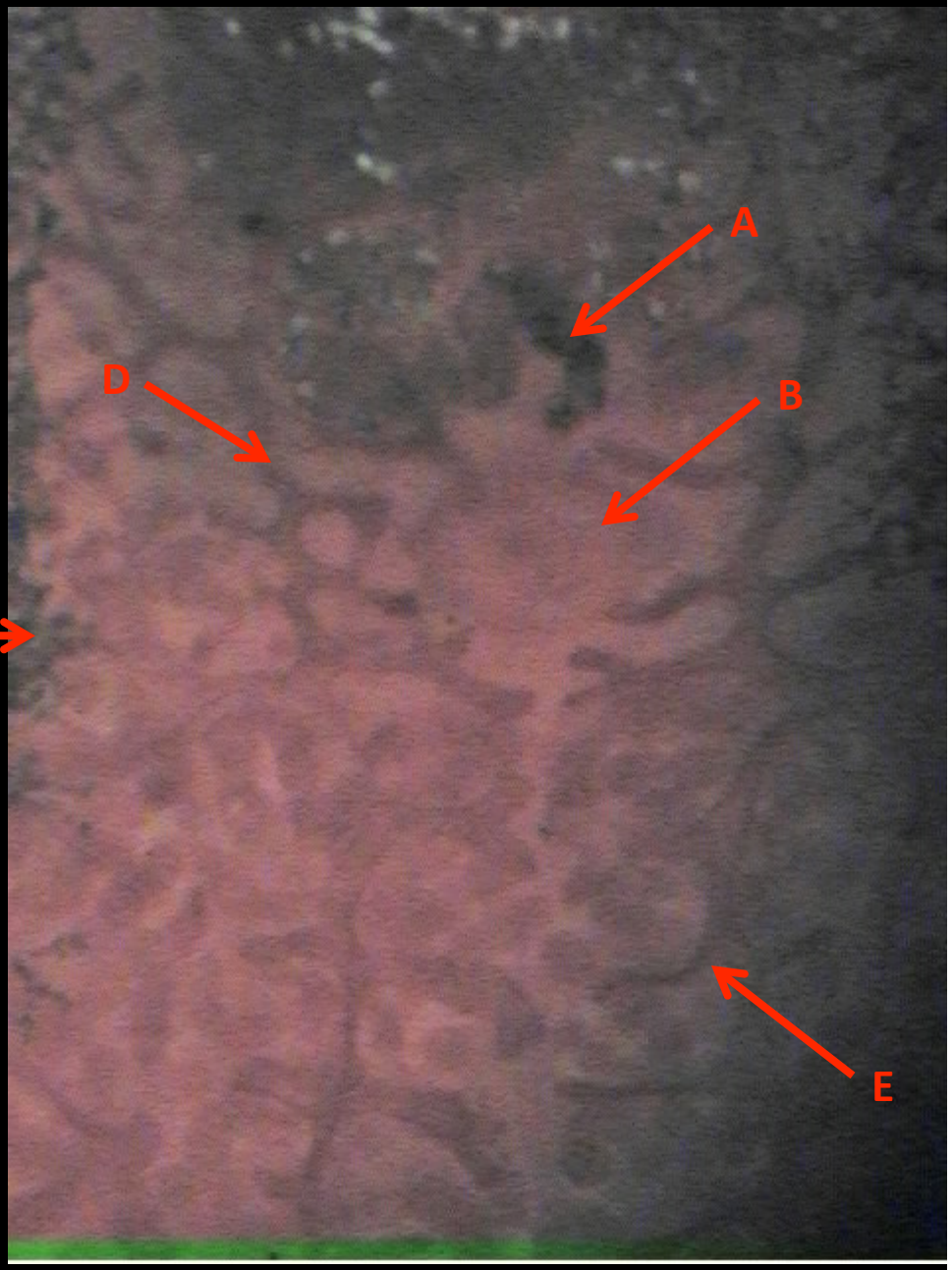


What Phylum does this organism belong to?

Phylum Platyhelminthes

What Class does this organism belong to?

Class Trematoda

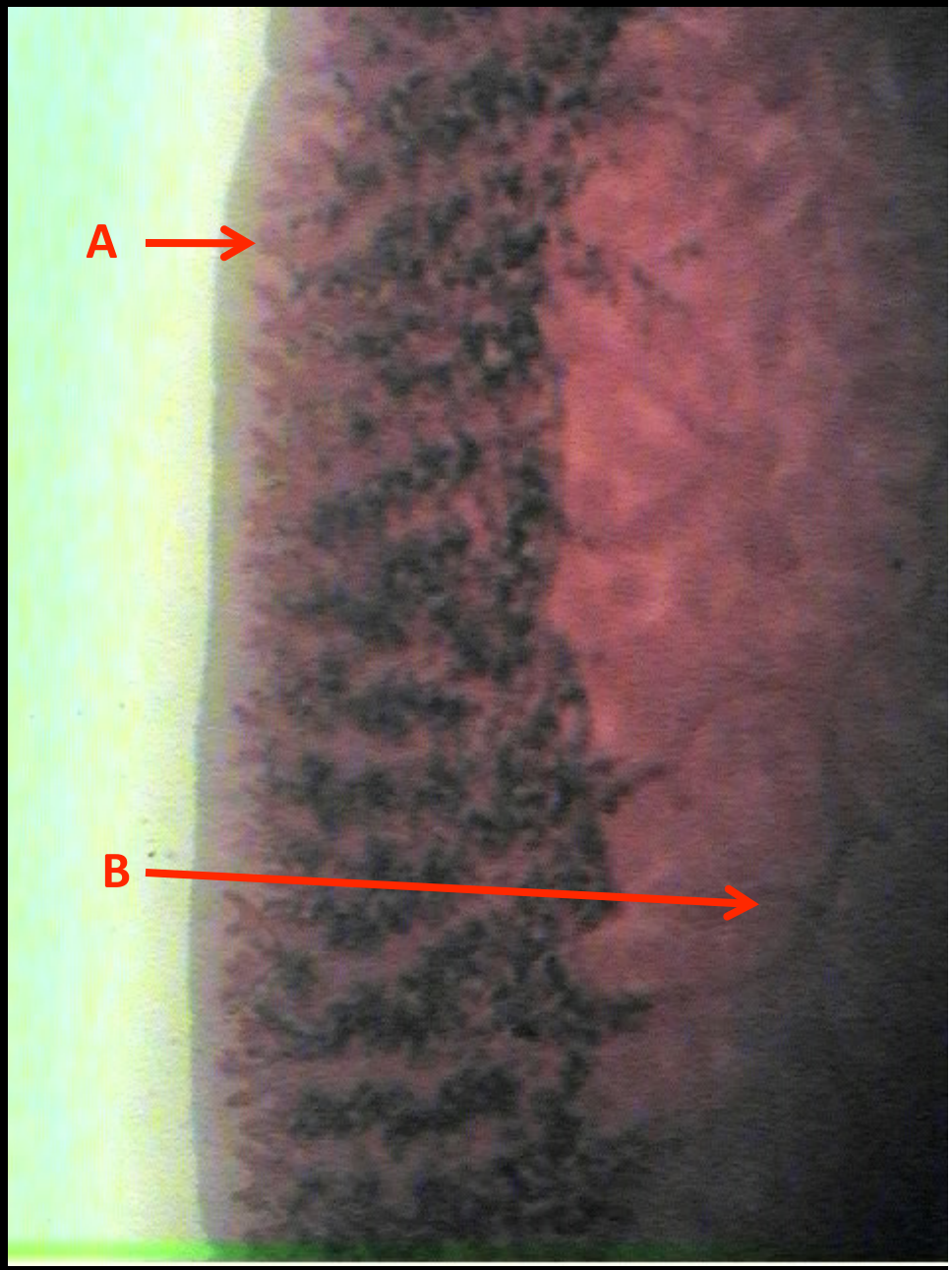
What kind of body cavity does this organism have?

Acoelomate

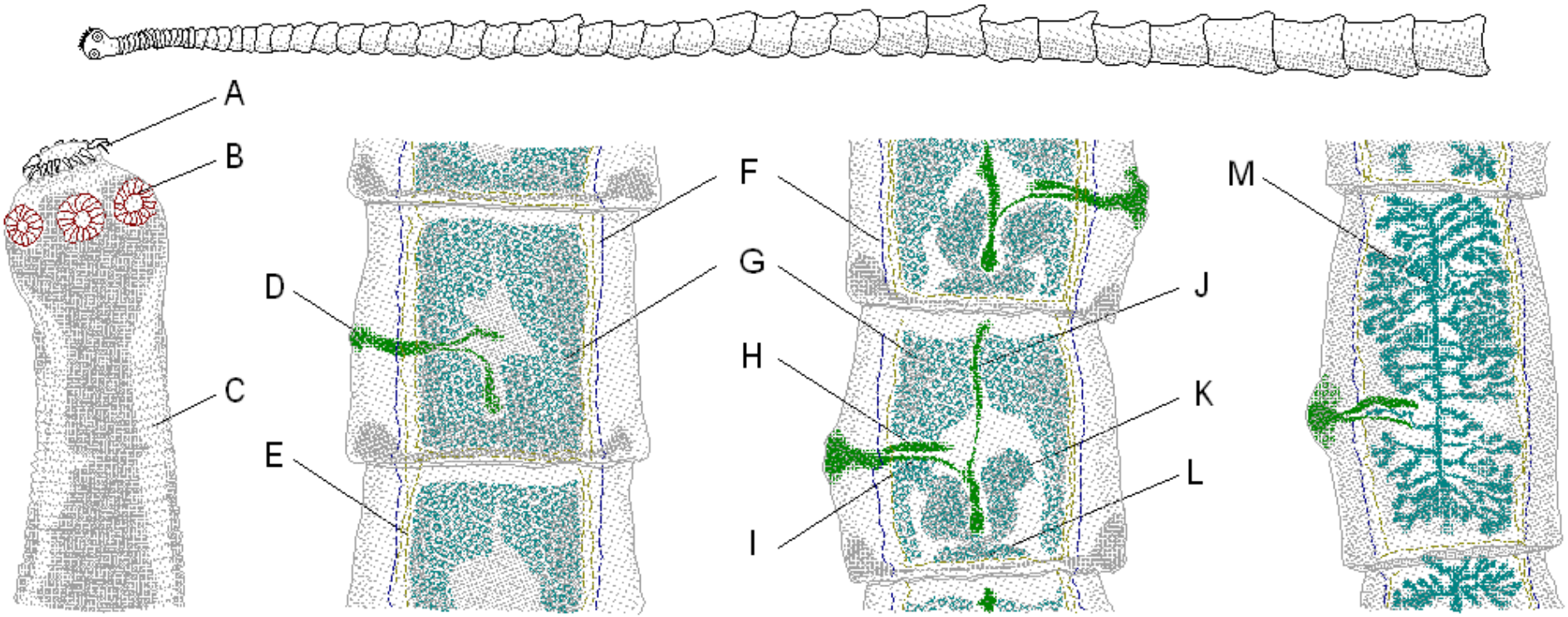
Name the structures at the pointers:

A: Yolk Gland

B: Testis



Structures of the Tapeworm
Phylum Platyhelminthes, Class Cestoidea



A) HOOKS ON SCOLEX

B) SUCKERS

C) YOUNG PROGLOTTIDS

D) GENITAL PORE

E) EXCRETORY CANAL

F) NERVE CORD

G) TESTES

H) SPERM DUCT

I) VAGINA

J) UTERUS

K) OVARY

L) YOLK GLAND

M) UTERUS WITH EGGS

What Phylum does this organism belong to?

Phylum Platyhelminthes

What Class does this organism belong to?

Class Cestoidea

What is the name of this structure?

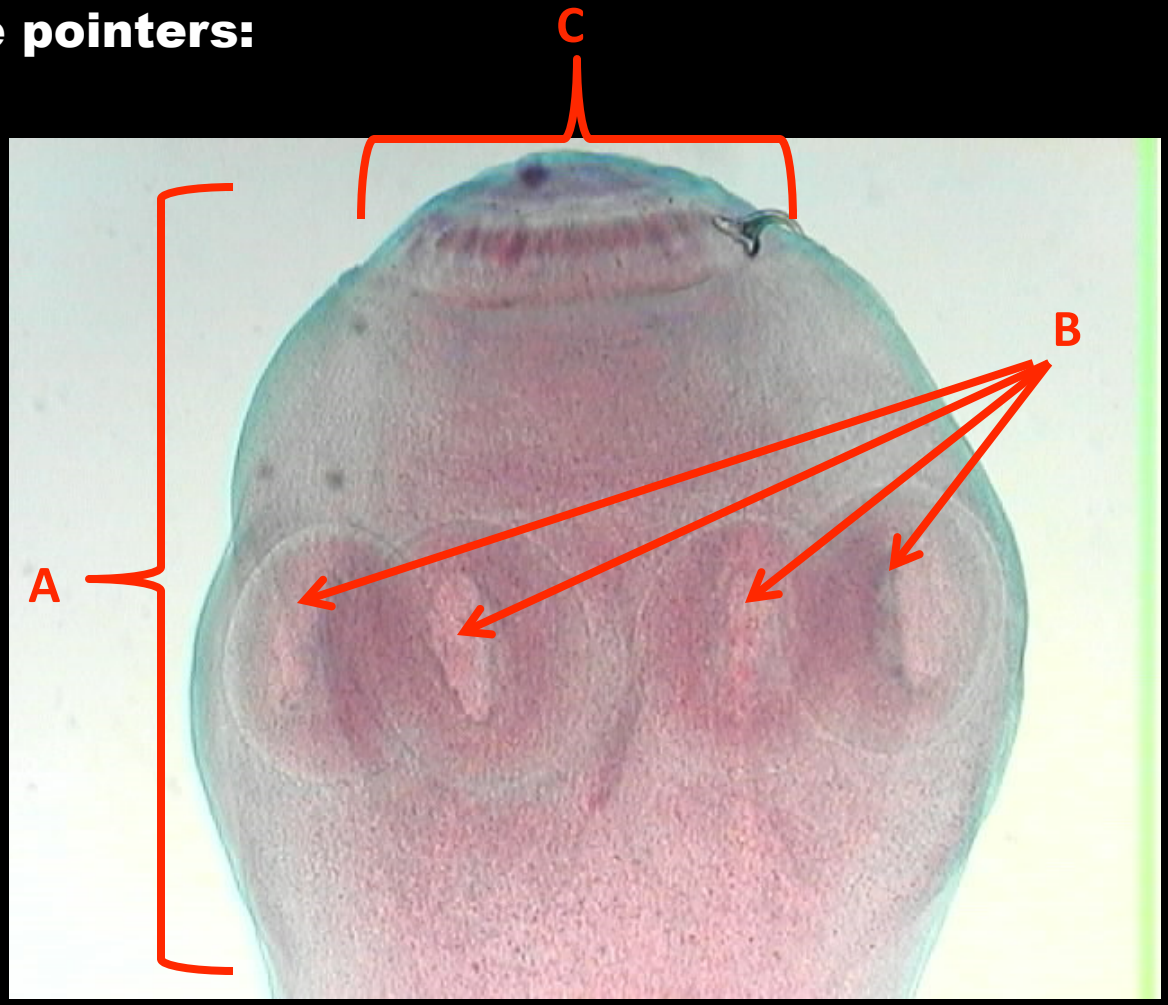
Scolex

Name the structures at the pointers:

A: Scolex

B: Suckers

C: Rostellum with hooks



What Phylum does this organism belong to?

Phylum Platyhelminthes

What Class does this organism belong to?

Class Cestoidea

What is the name of this structure?

Proglottids

Name the structures at the pointers:

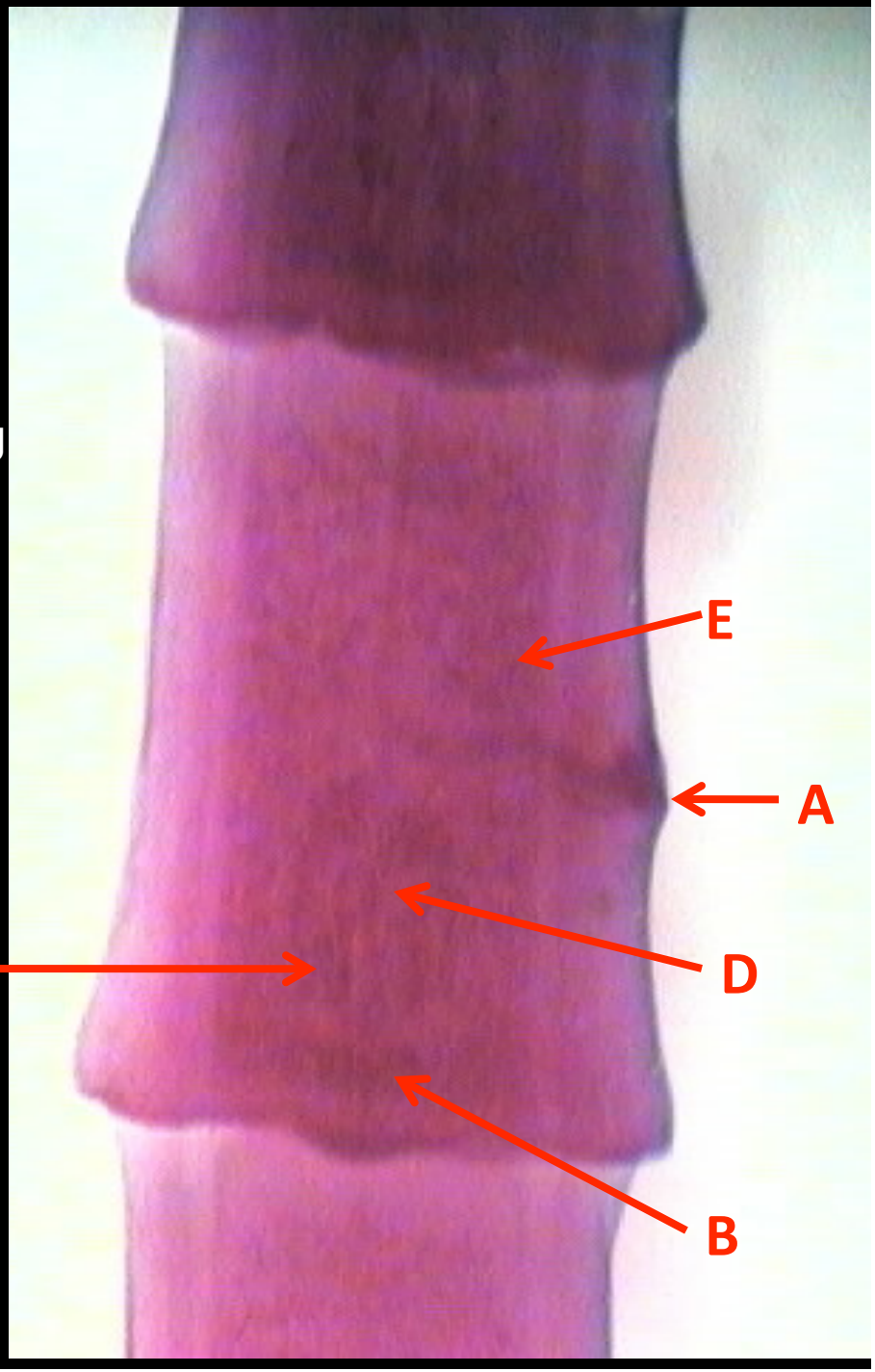
A: Genital Pore

B: Yolk Gland

C: Ovaries

D: Uterus

E: Testes



What Phylum does this organism belong to?

Phylum Platyhelminthes

What Class does this organism belong to?

Class Cestoidea

What is the name of this structure?

Proglottid

What type of body cavity Does this organism have?

Aceolomate

Name the structures at the pointers:

A: Ductus Deferens

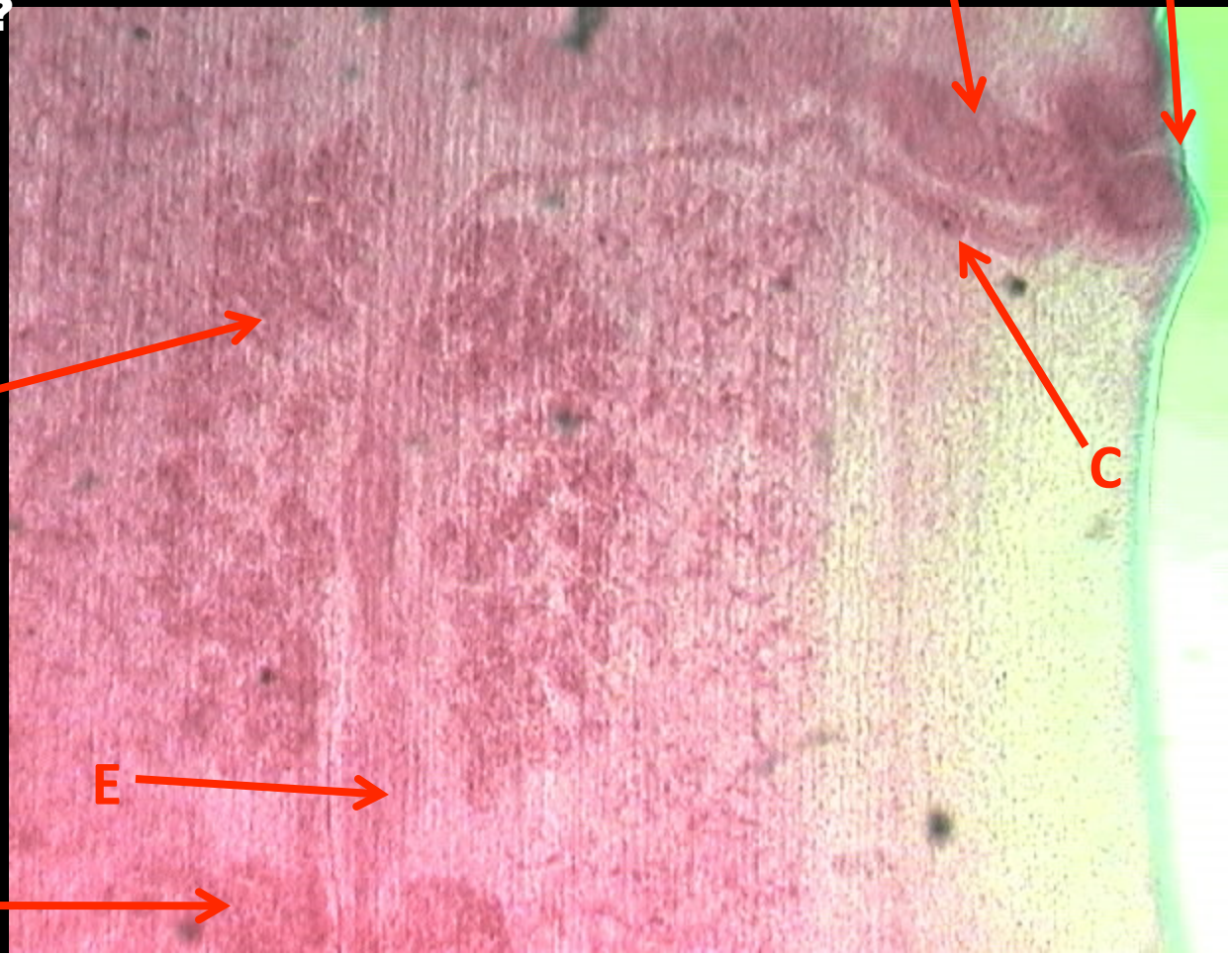
B: Genital Pore

C: Vagina

D: Testes

E: Uterus

F: Ovary



What Phylum does this organism belong to?

Phylum Nematoda

What type of body cavity does this organism have?

Pseudocoelomate

Name the structures at the pointers:

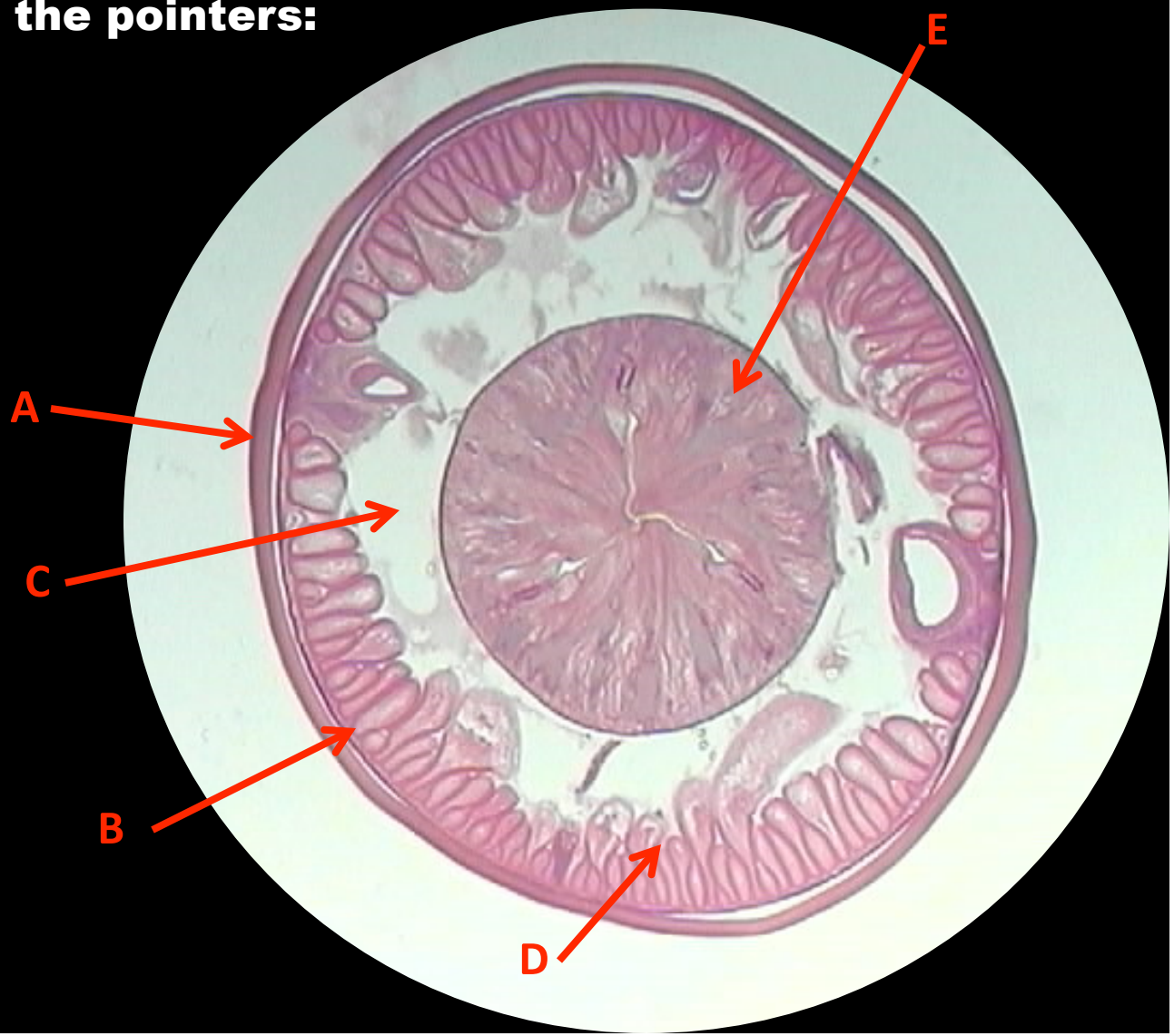
A: Cuticle

B: Epidermis

C: Pseudocoel

D: Longitudinal Muscle

E: intestines



A) DORSAL NERVE CORD

B) OVIDUCTS

C) UTERUS WITH EGGS

D) OVARIES

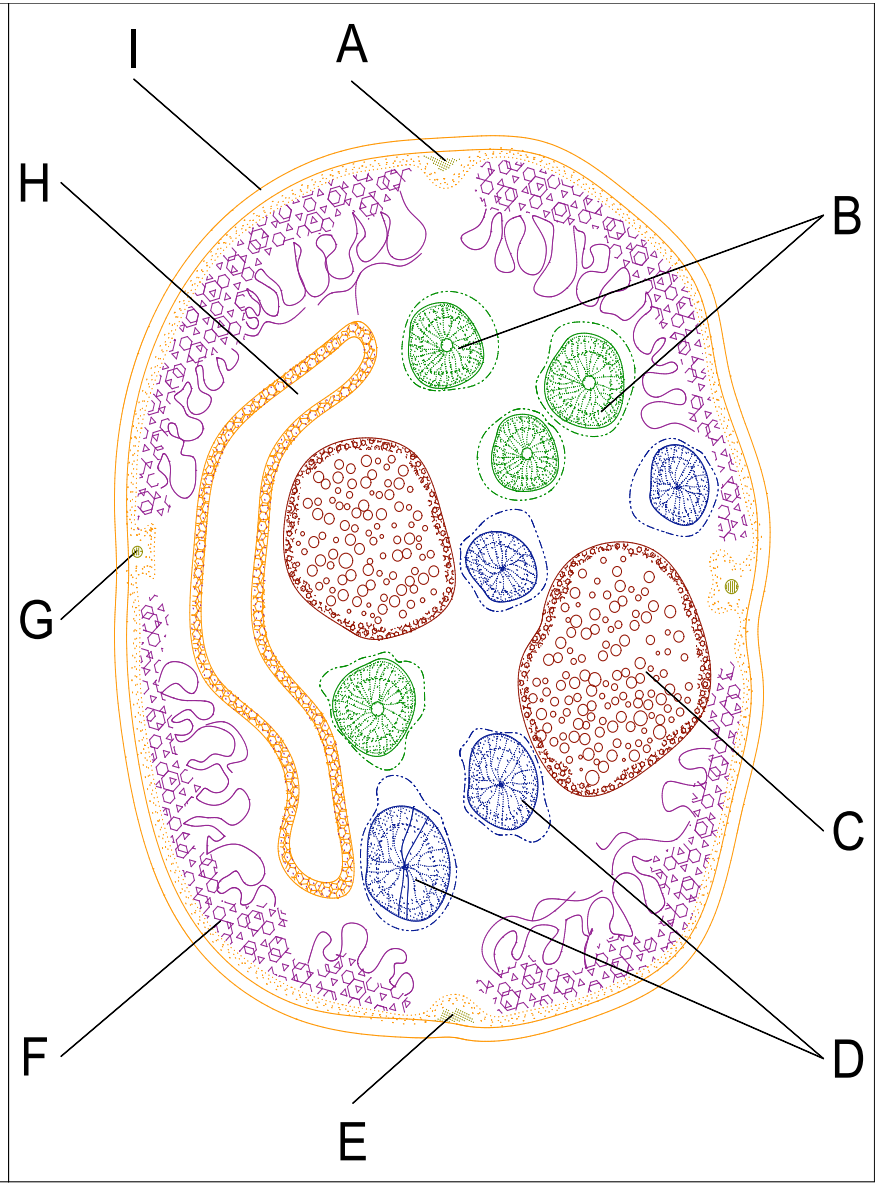
E) VENTRAL NERVE CORD

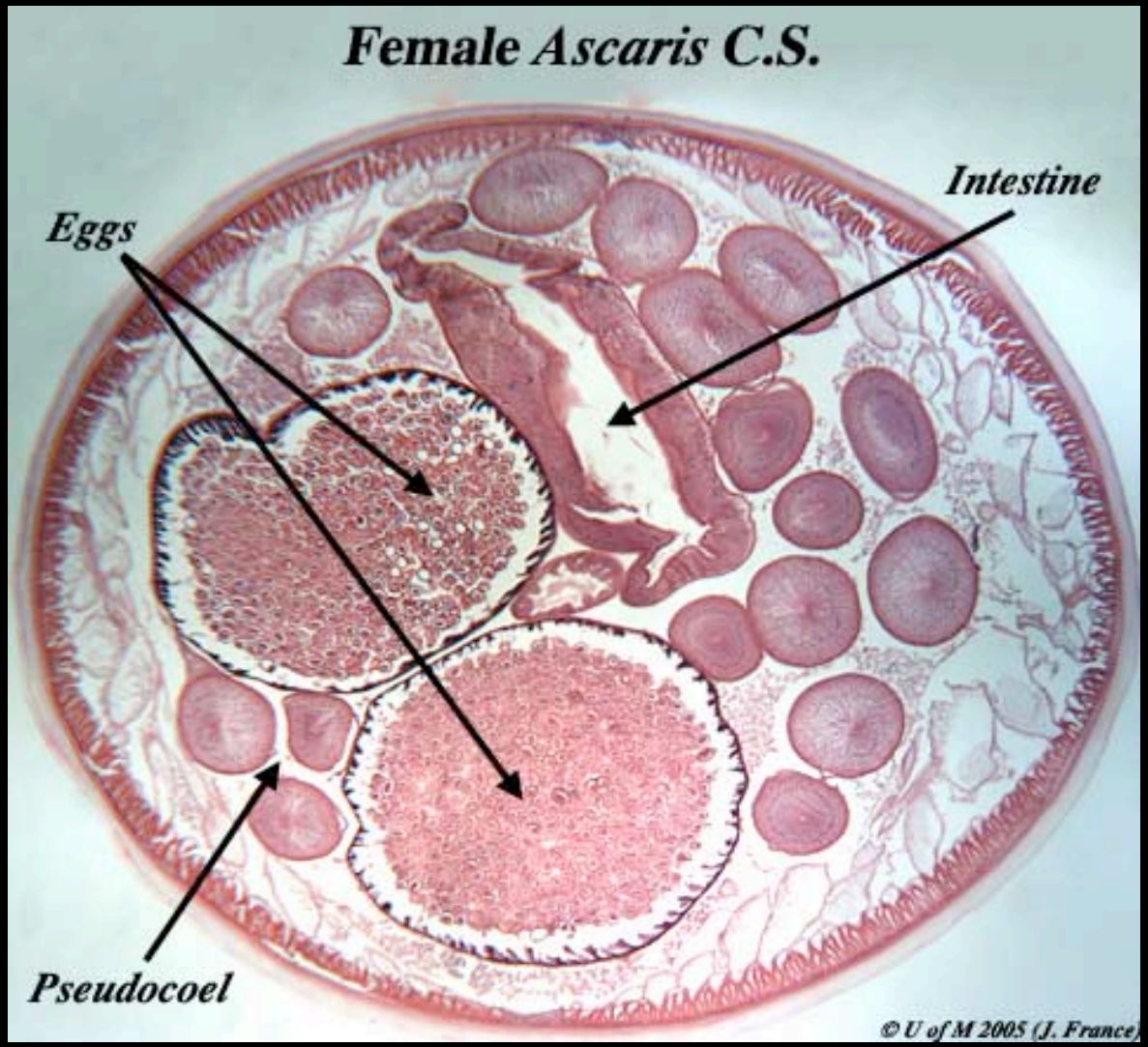
F) LONGITUDINAL MUSCLES

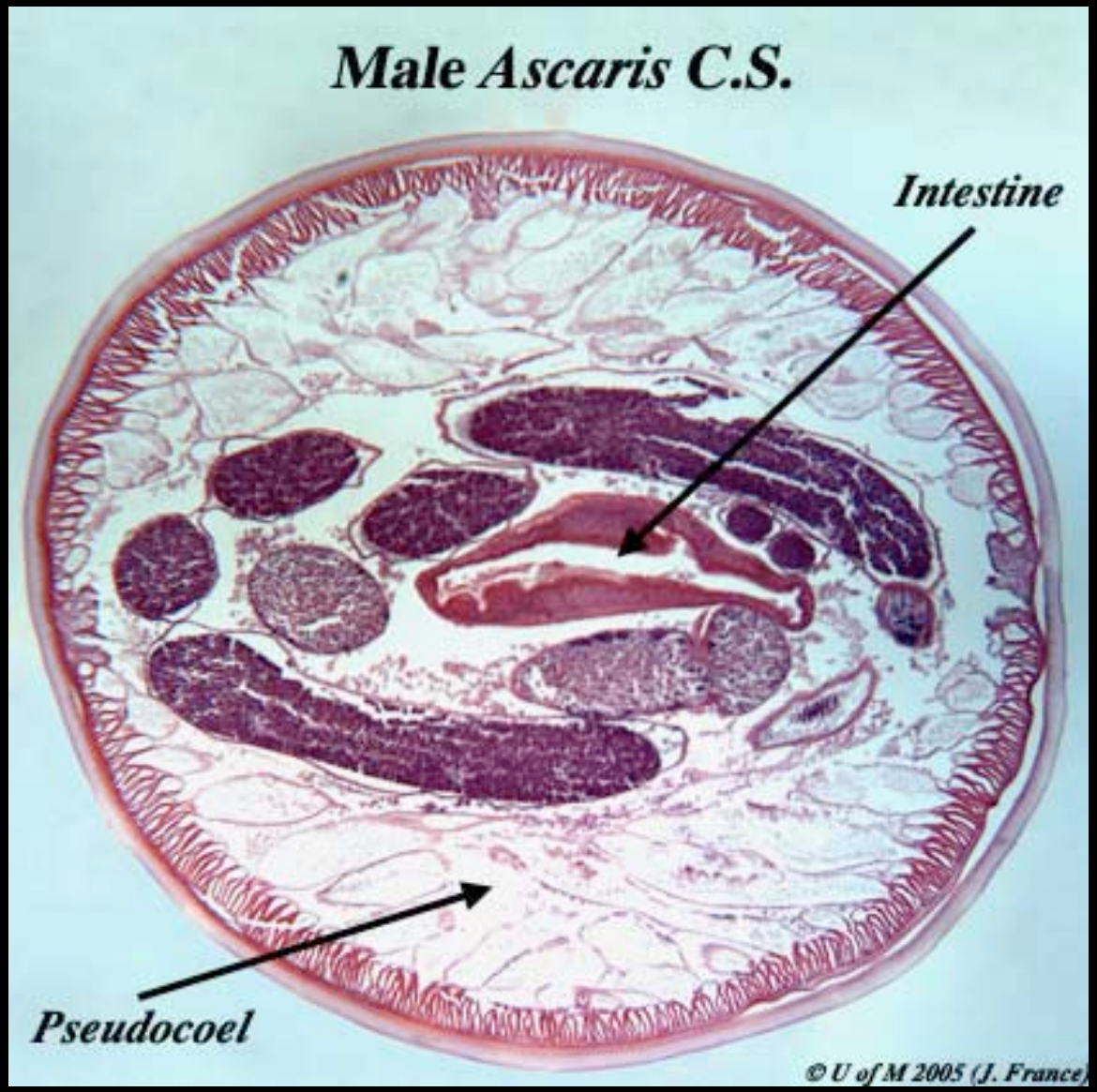
G) LATERAL LINE

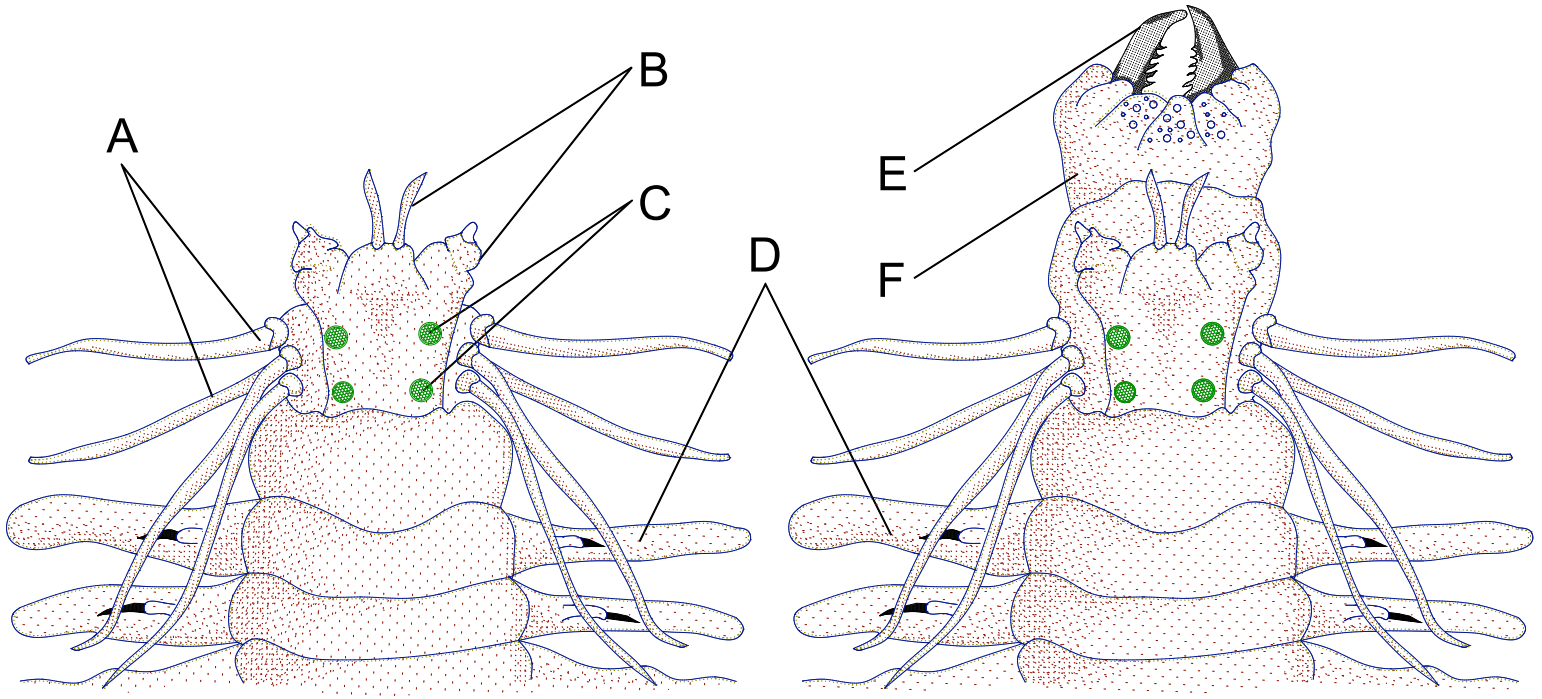
H) INTESTINE

I) CUTICLE WITH UNDERLYING HYPODERMIS

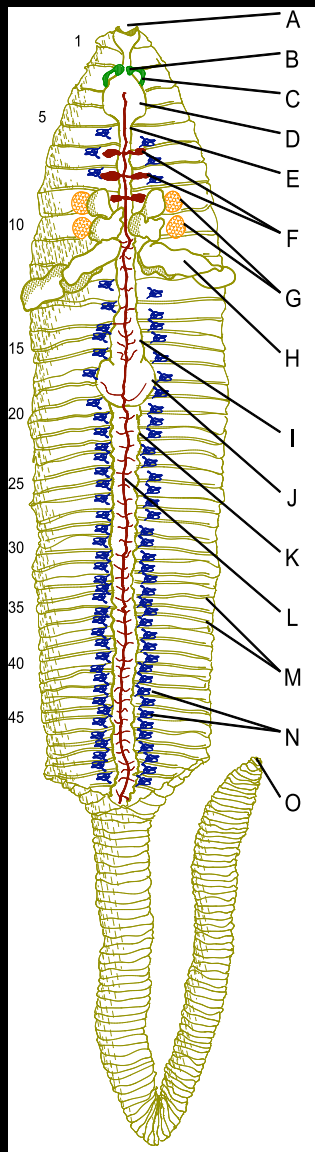



Female Ascaris C.S.
Intestine
Eggs
Pseudocoel
© U of M 2005 (J. France)


Male Ascaris C.S.
Intestine
Pseudocoel
© U of M 2005 (J. France)



A) TENTACLES
B) SENSORY PAPILLAE
C) EYES
D) PARAPODIA
E) JAWS
F) EVERTED PHARYNX



A) MOUTH

B) BRAIN

C) CIRCUM-PHARNGEAL CONNECTIVE

D) PHARYNYX

E) ESOPHAGUS

F) "HEARTS" (5 PAIR)

G) SEMINAL RECEPTACLES

H) SEMINAL VESICLES

I) CROP

J) GIZZARD

K) INTESTINE

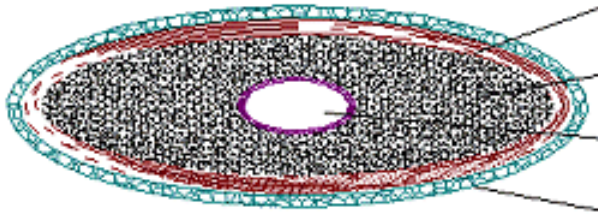
L) DORSAL BLOOD VESSEL

M) SEPTA

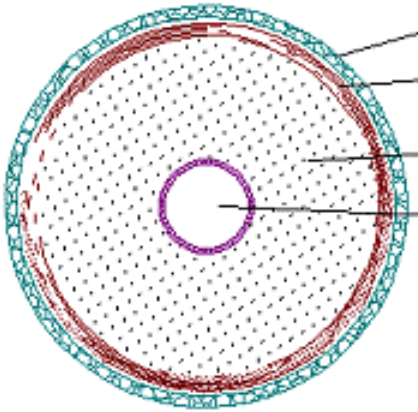
N) NEPHRIDIA

O) ANUS

J



L



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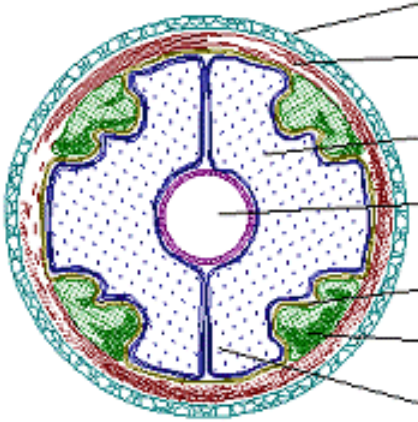
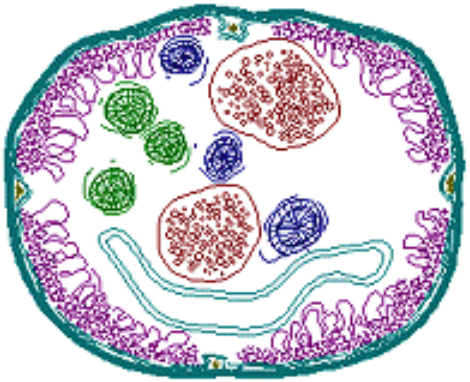


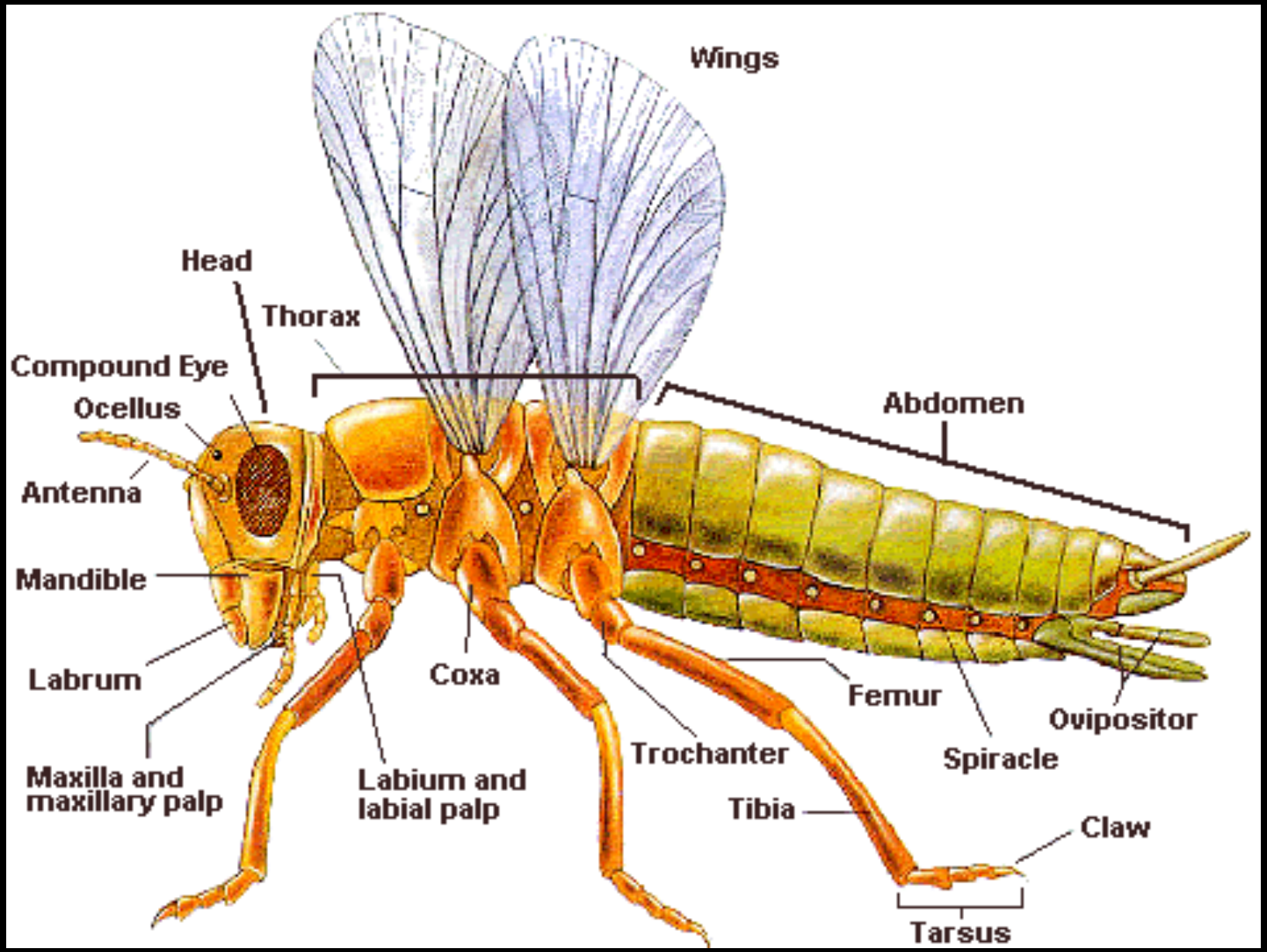
K

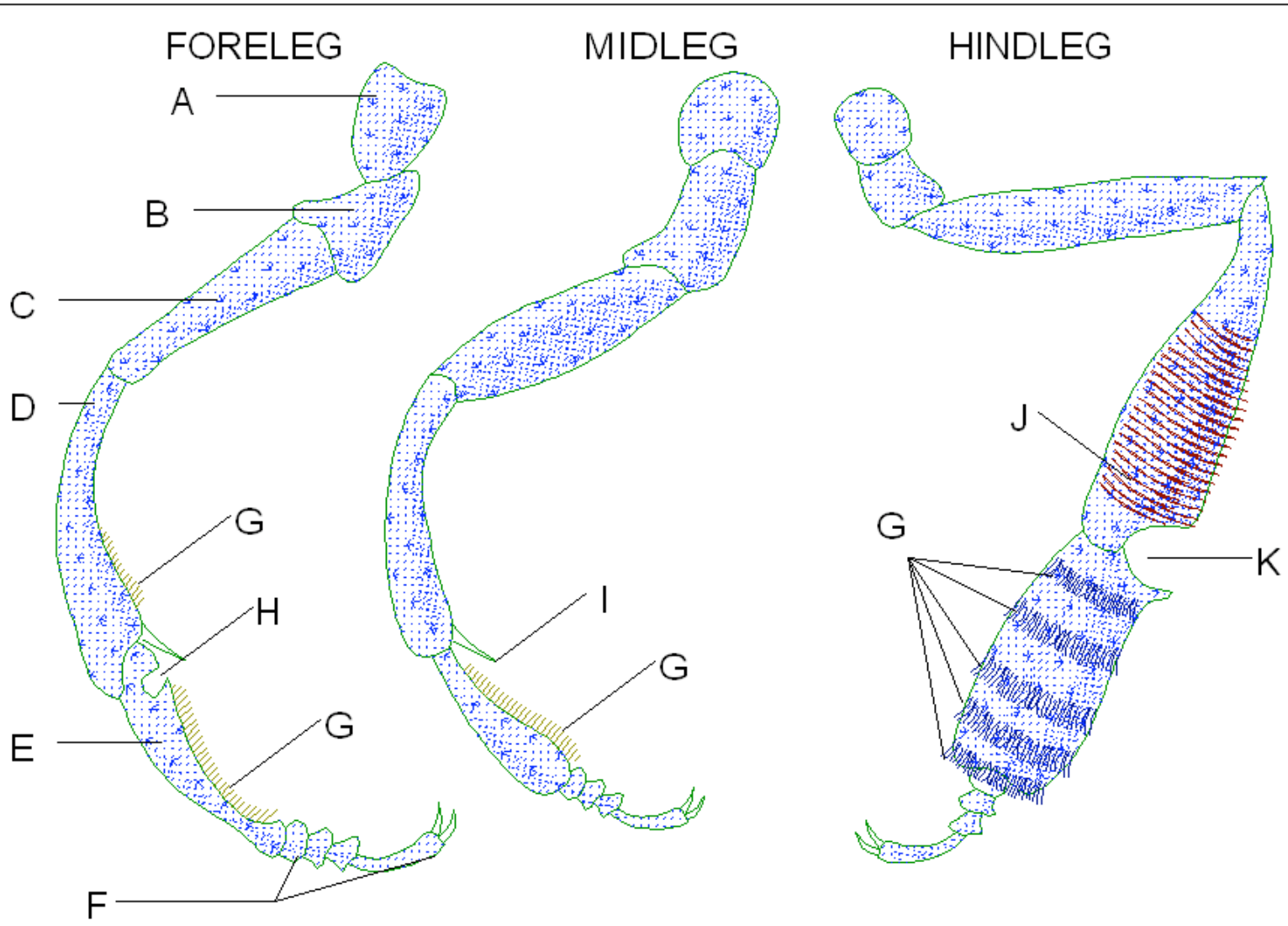
M



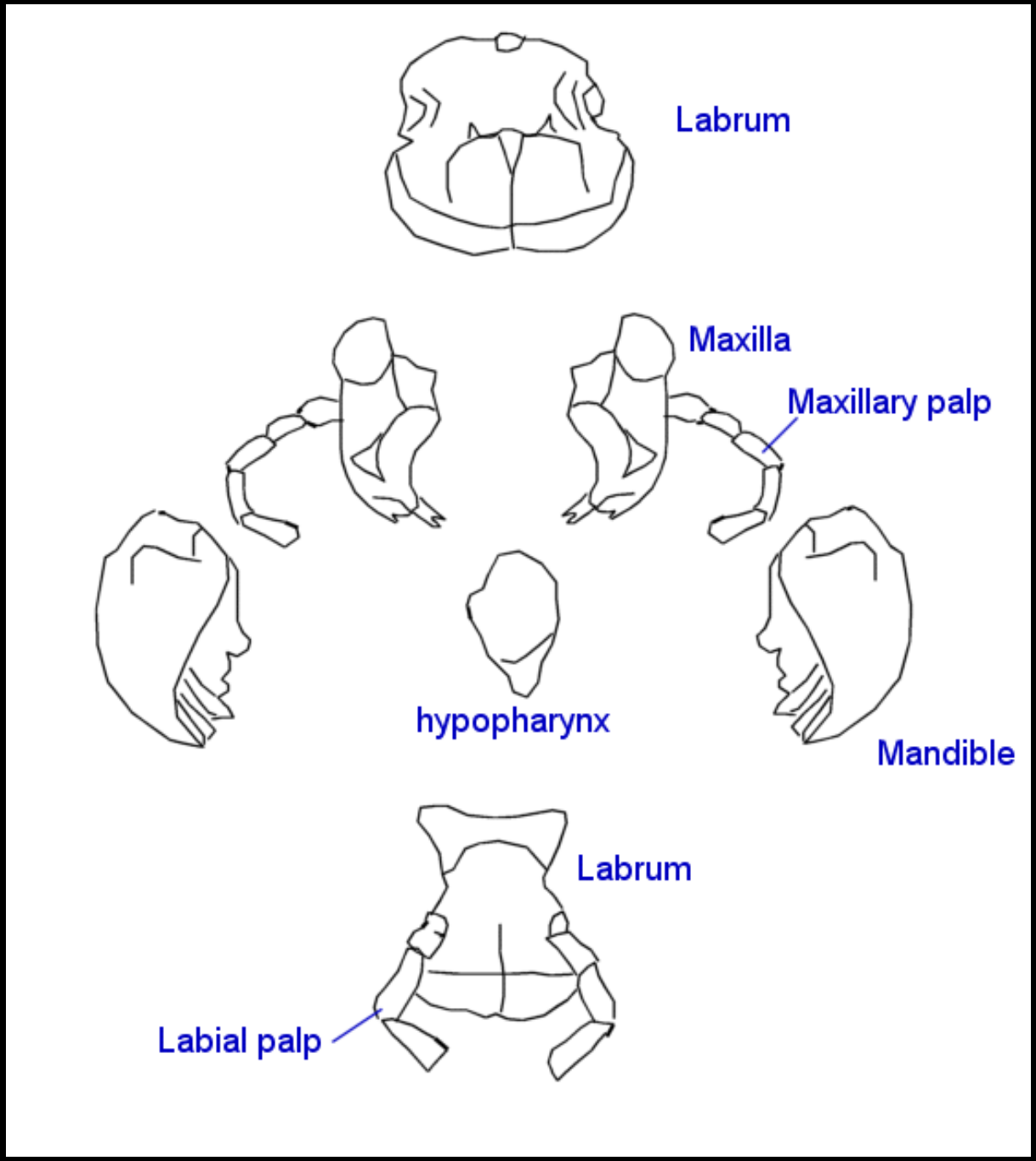
O

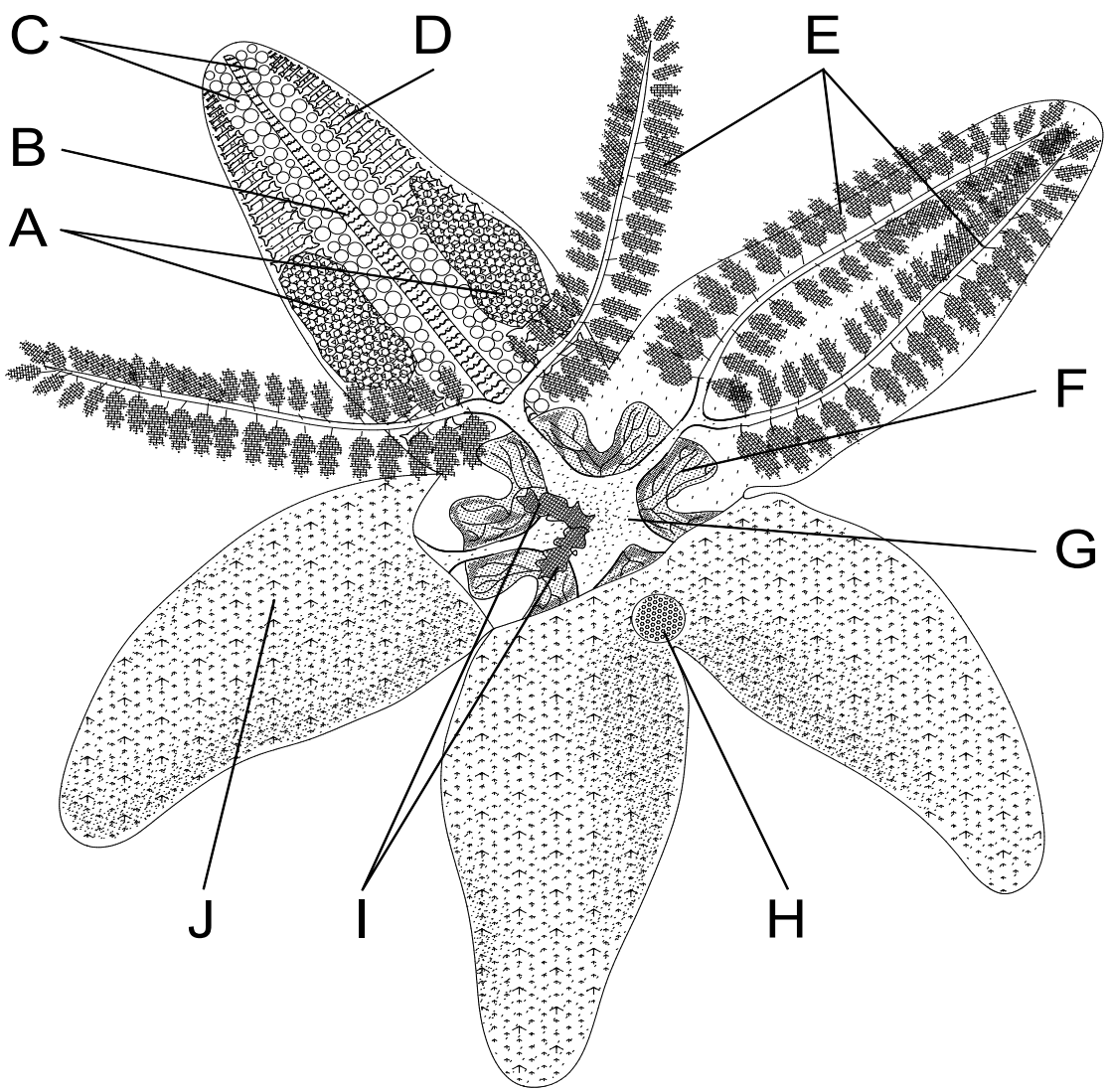
A) MUSCLE LAYER
B) PARENCHYMA
C) GUT
D) EPIDERMIS
E) PSEUDOCOEL
F) COELOM
G) PERITONEUM
H) ORGANS
I) MESENTERY
J) ACOEL BODY PLAN
K) PLATYHELMINTH
L) PSEUDOCOEL BODY PLAN
M) NEMATODE
N) COELOMATE BODY PLAN
O) ANNELID

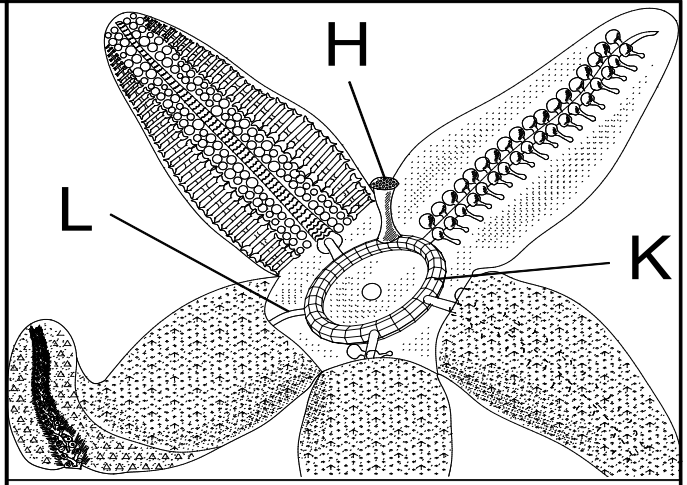

Wings
Head
Thorax
Compound Eye
Ocellus
Antenna
Abdomen
Mandible
Labrum
Coxa
Femur
Ovipositor
Trochanter
Spiracle
Maxilla and
maxillary palp
Labium and
labial palp
Tibia
Claw
Tarsus



A) COXA
B) TROCHANTER
C) FEMUR
D) TIBIA
E) METATARSUS
F) TARSUS
G) POLLEN BRUSH
H) ANTENNA CLEANER
I) WAX SPUR
J) POLLEN BASKET
K) POLLEN PACKER


Labrum
Maxilla
Maxillary palp
hypopharynx
Mandible
Labrum
Labial palp





A) GONADS

B) AMBULACRAL RIDGE

C) AMPULLA

D) AMBULACRAL PLATES

E) DIGESTIVE GLANDS

F) CARDIAC STOMACH

G) PYLORIC STOMACH

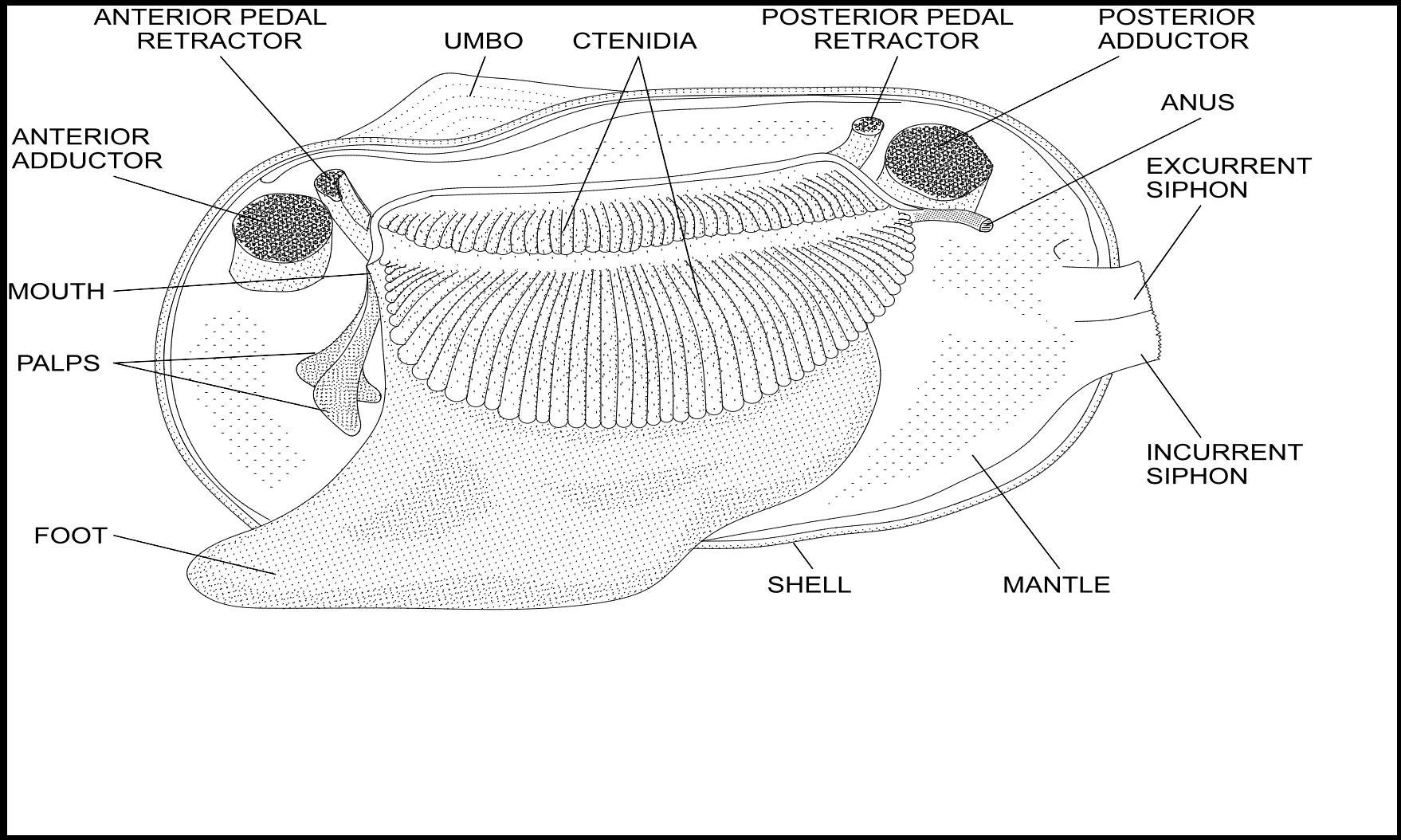
H) MADREPORITE

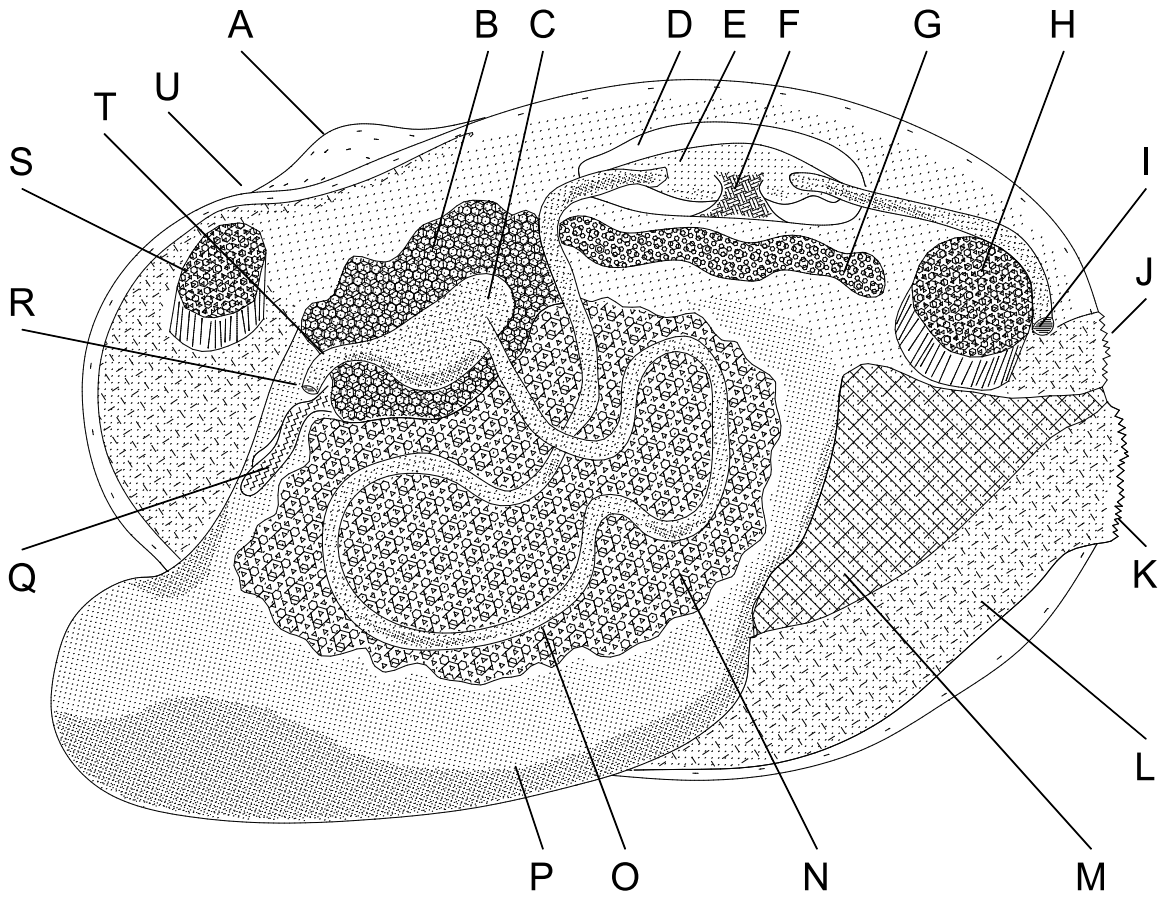
I) RECTAL CECUM

J) SPINES AND PEDICELLARIA

K) RING CANAL

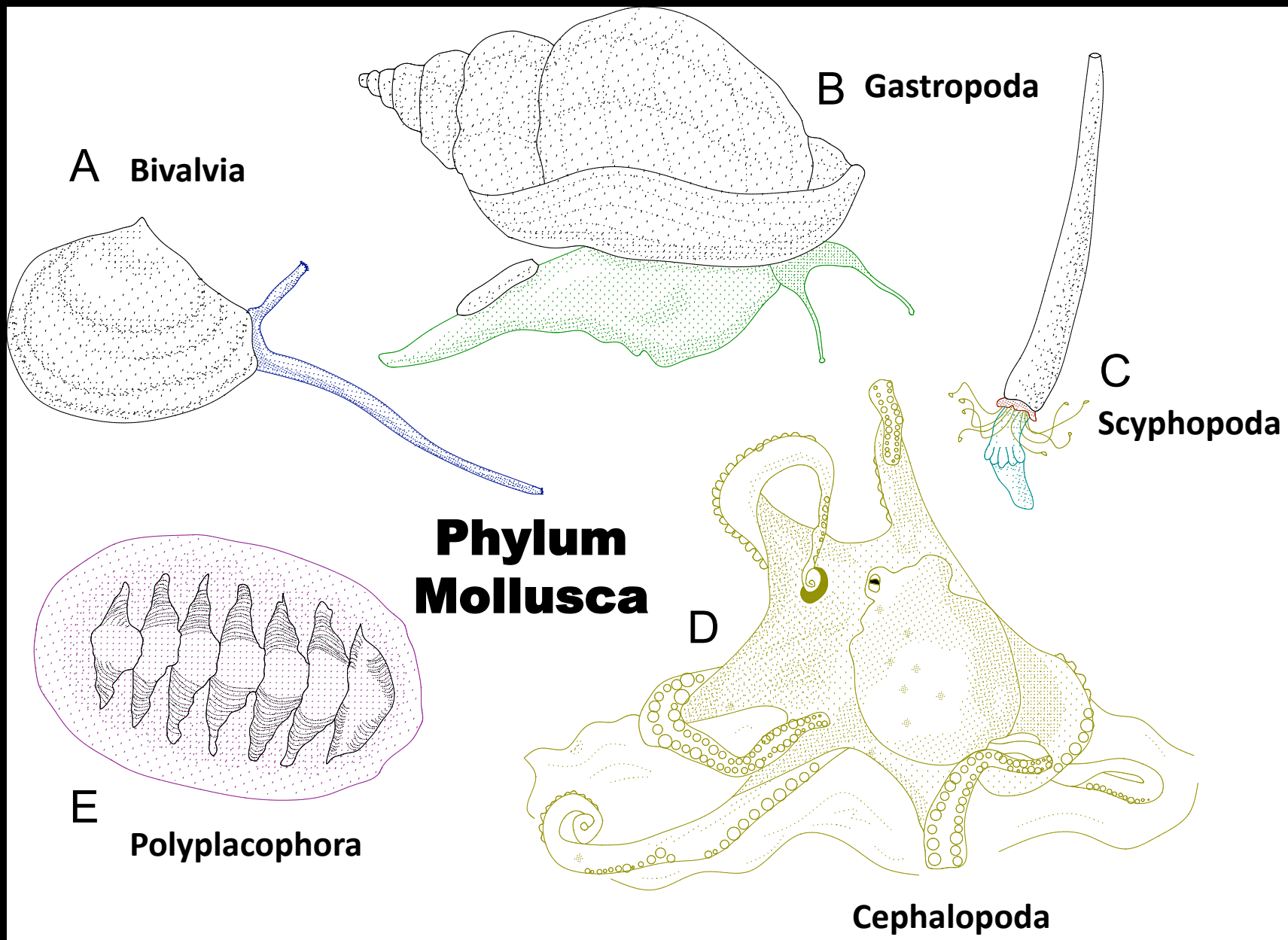
L) RADIAL CANAL

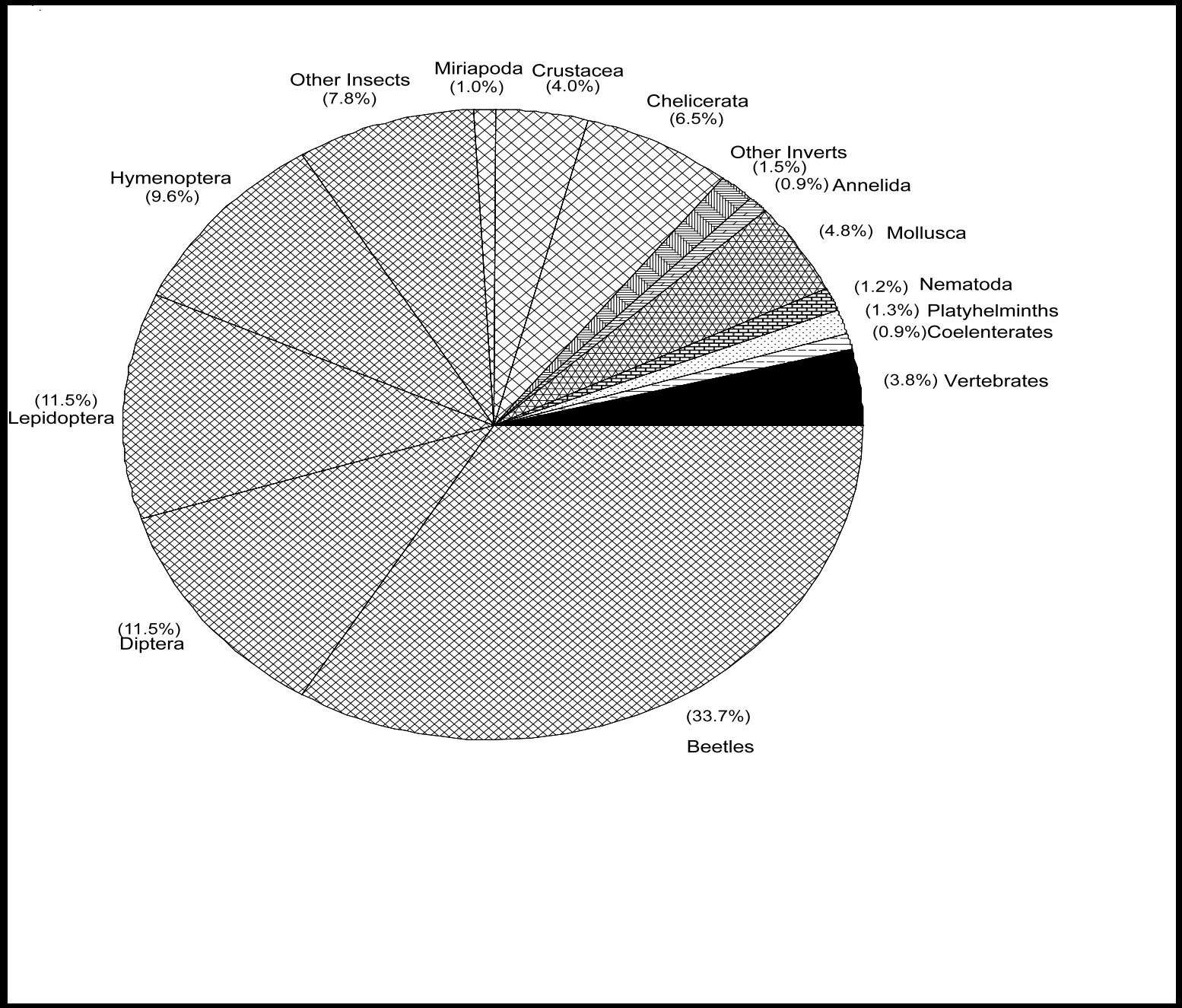

ANTERIOR PEDAL RETRACTOR
UMBO
CTENIDIA
POSTERIOR PEDAL RETRACTOR
POSTERIOR ADDUCTOR
ANUS
ANTERIOR ADDUCTOR
EXCURRENT SIPHON
MOUTH
PALPS
INCURRENT SIPHON
FOOT
SHELL
MANTLE

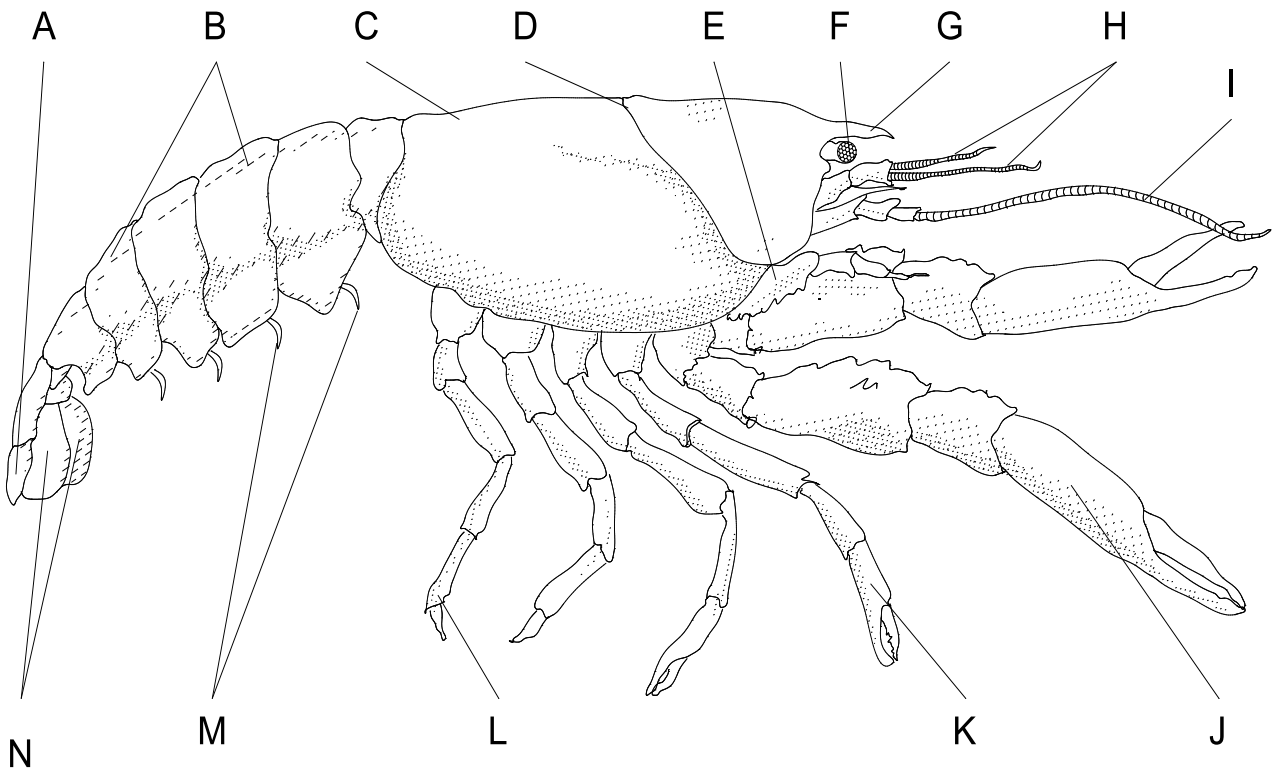


A) UMBO
B) DIGESTIVE GLAND
C) STOMACH
D) PERICARDIUM
E) VENTRICLE
F) AURICLE
G) KIDNEY
H) POSTERIOR ADDUCTOR
I) ANUS
J) EXCURRENT SIPHON
K) INCURRENT SIPHON
L) MANTLE
M) GILL
N) DIGESTIVE GLAND
O) INTESTINE
P) FOOT
Q) PALPS
R) MOUTH
S) ANTERIOR ADDUCTOR
T) ESOPHAGUS

Name the classes of the following organisms. What Phylum do these organisms belong to?




Other Insects
(7.8%)
Miriapoda
(1.0%)
Crustacea
(4.0%)
Chelicerata
(6.5%)
Other Inverts
(1.5%)
(0.9%) Annelida
(4.8%) Mollusca
(1.2%) Nematoda
(1.3%) Platyhelminths
(0.9%)Coelenterates
(3.8%) Vertebrates
Hymenoptera
(9.6%)
(11.5%)
Lepidoptera
(11.5%)
Diptera
(33.7%)
Beetles



A) TELSON

B) ABDOMEN

C) CARAPACE

D) CERVICAL GROOVE

E) MAXILLIPED

F) EYE

G) ROSTRUM

H) ANTENNULES

I) ANTENNA

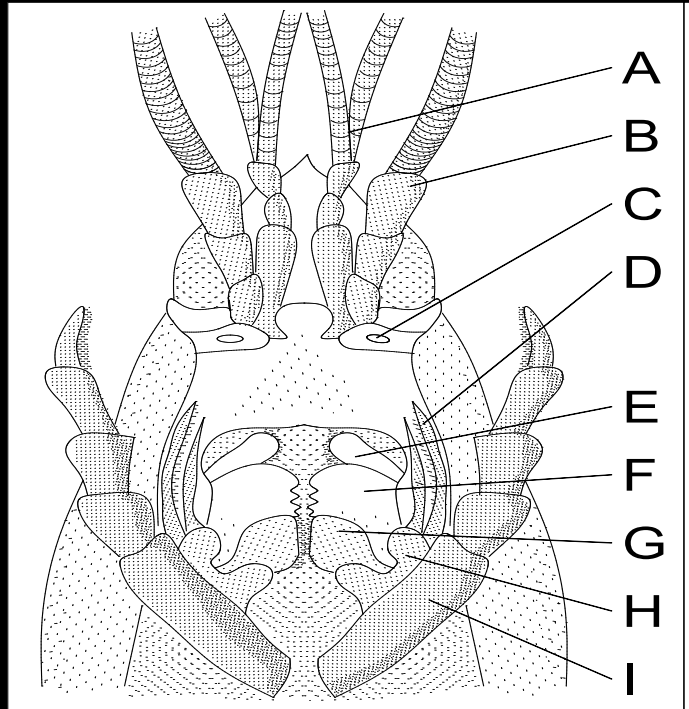
J) CHELIPED

K) FIRST WALKING LEG

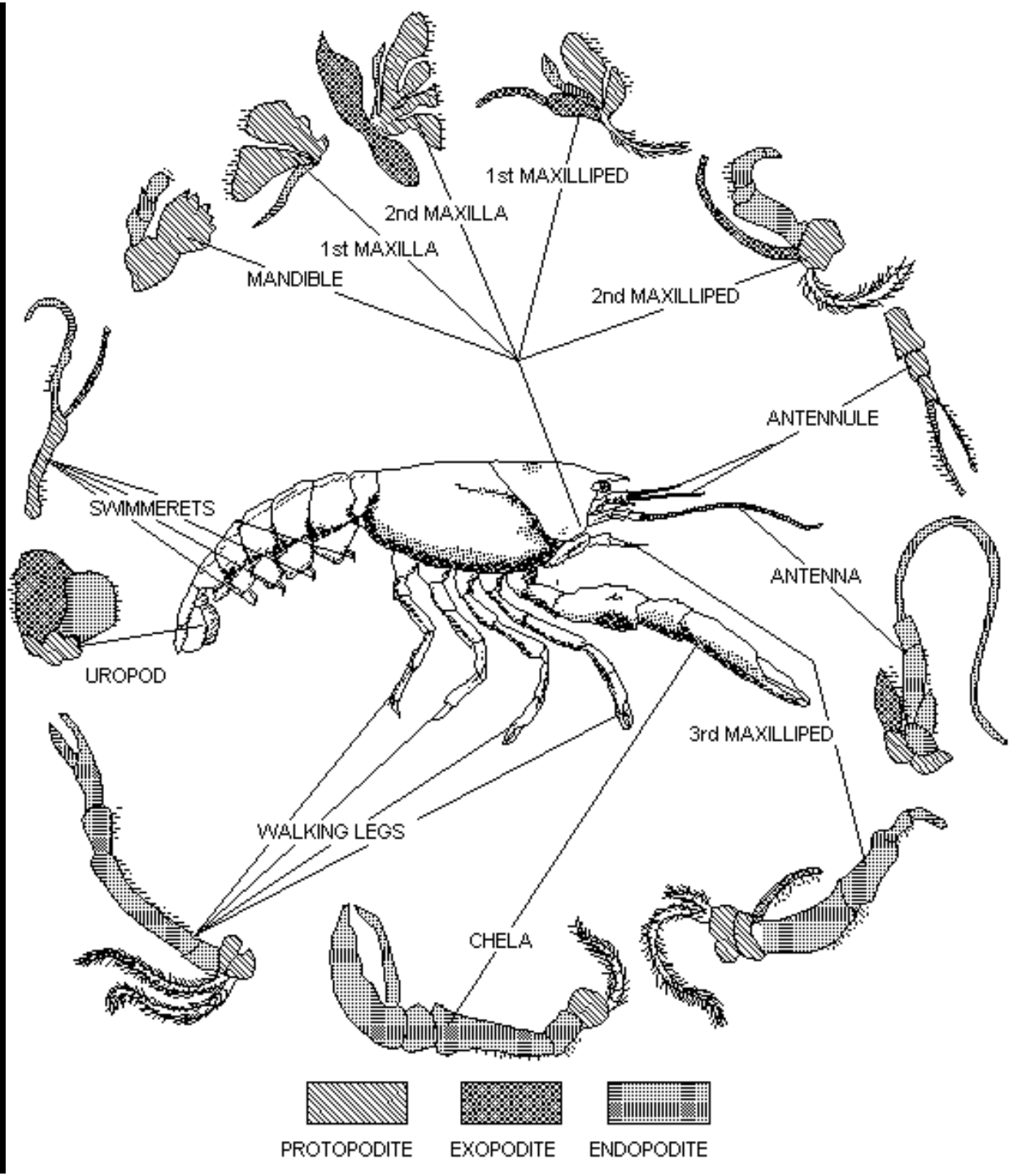
L) FORTH WALKING LEG

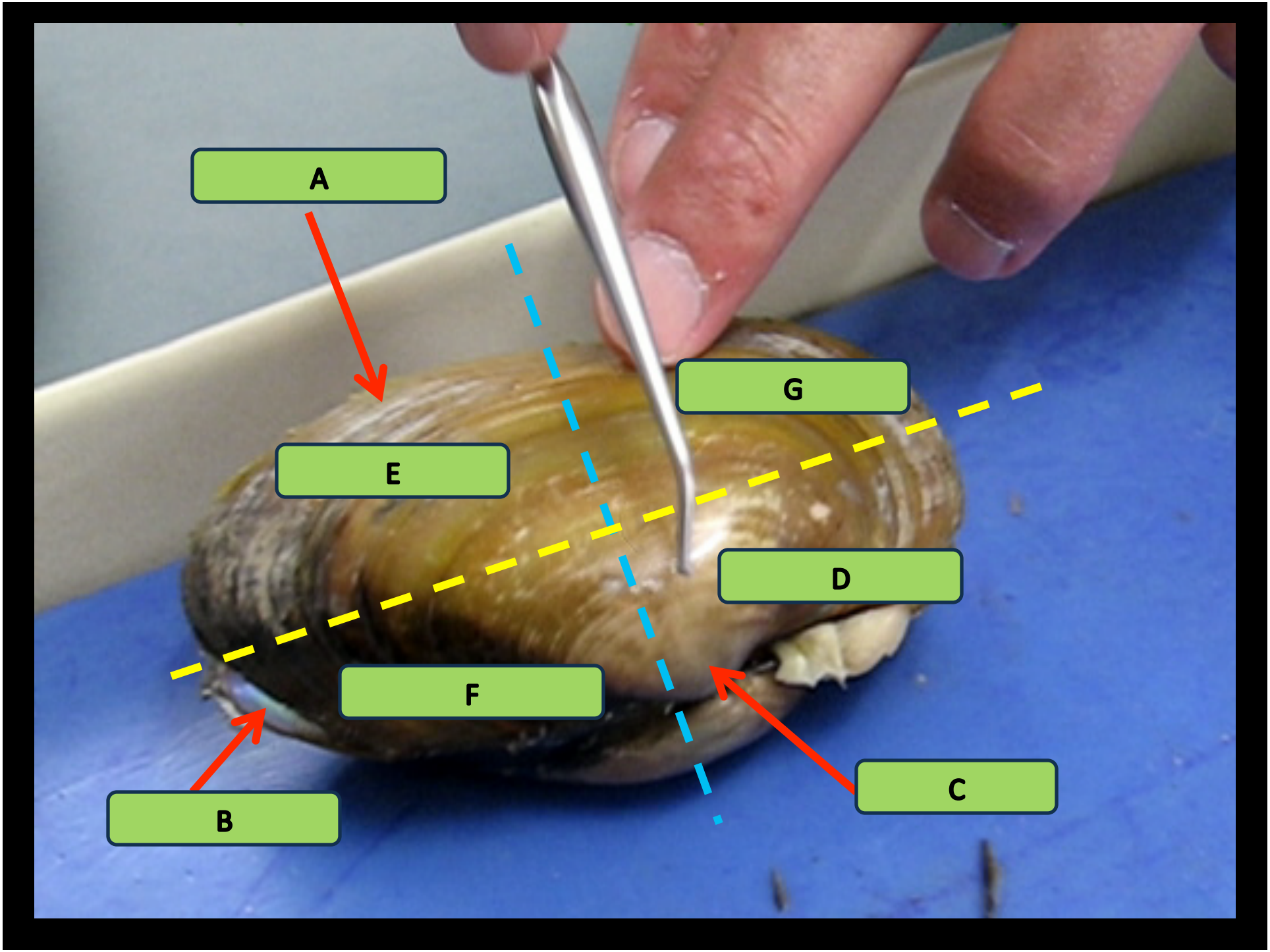
M) SWIMMERETS

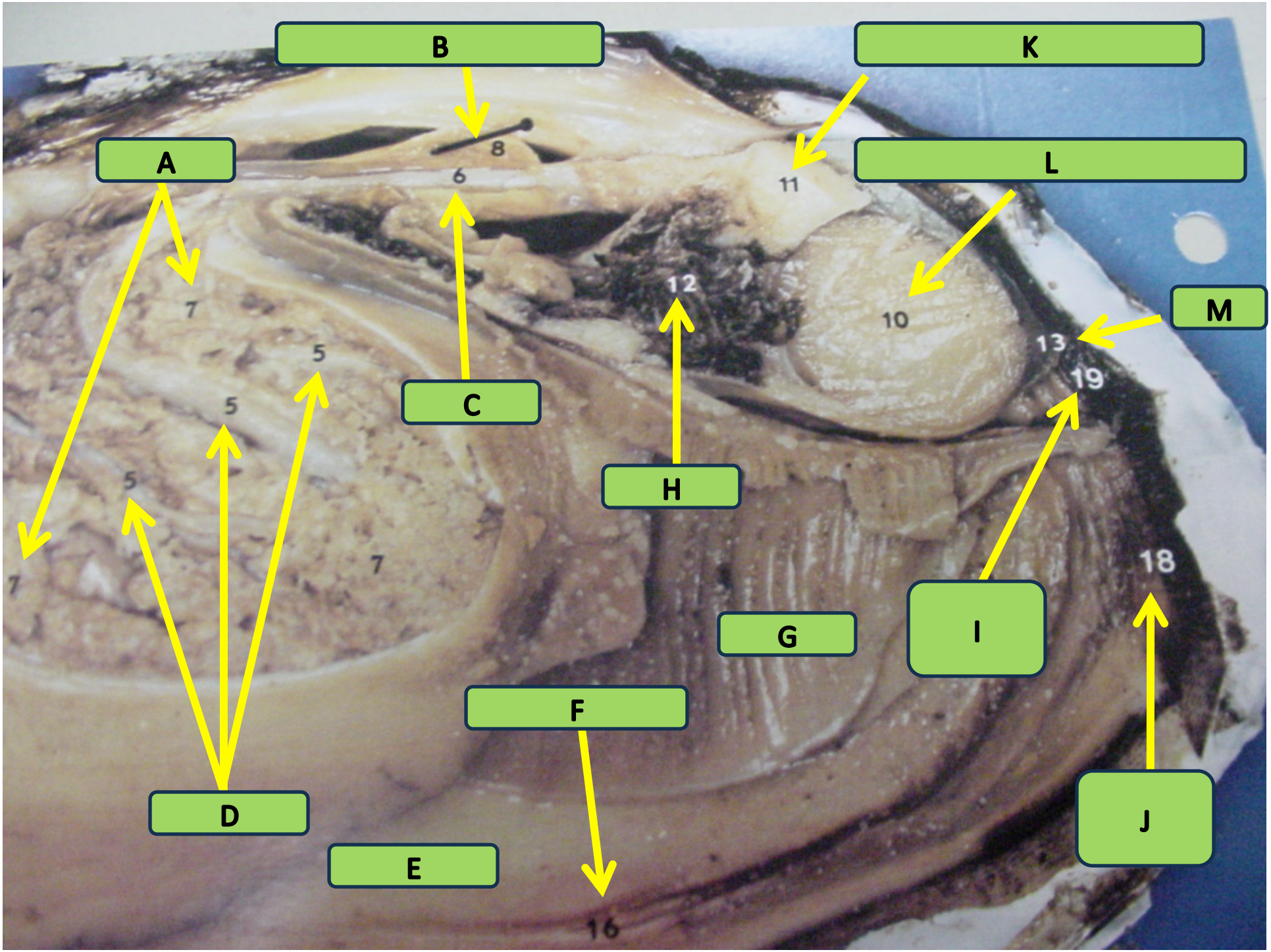
N) UROPODS

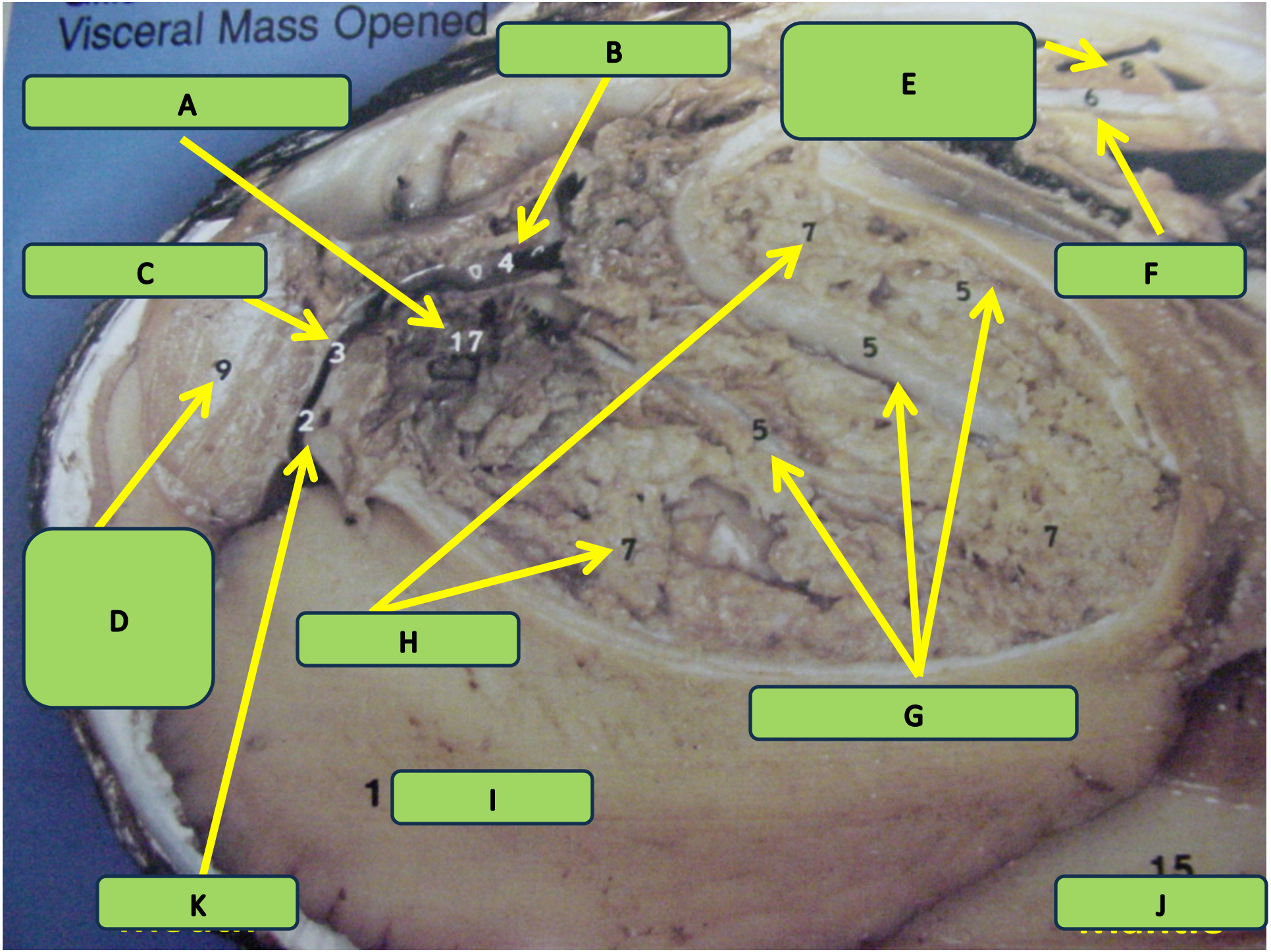


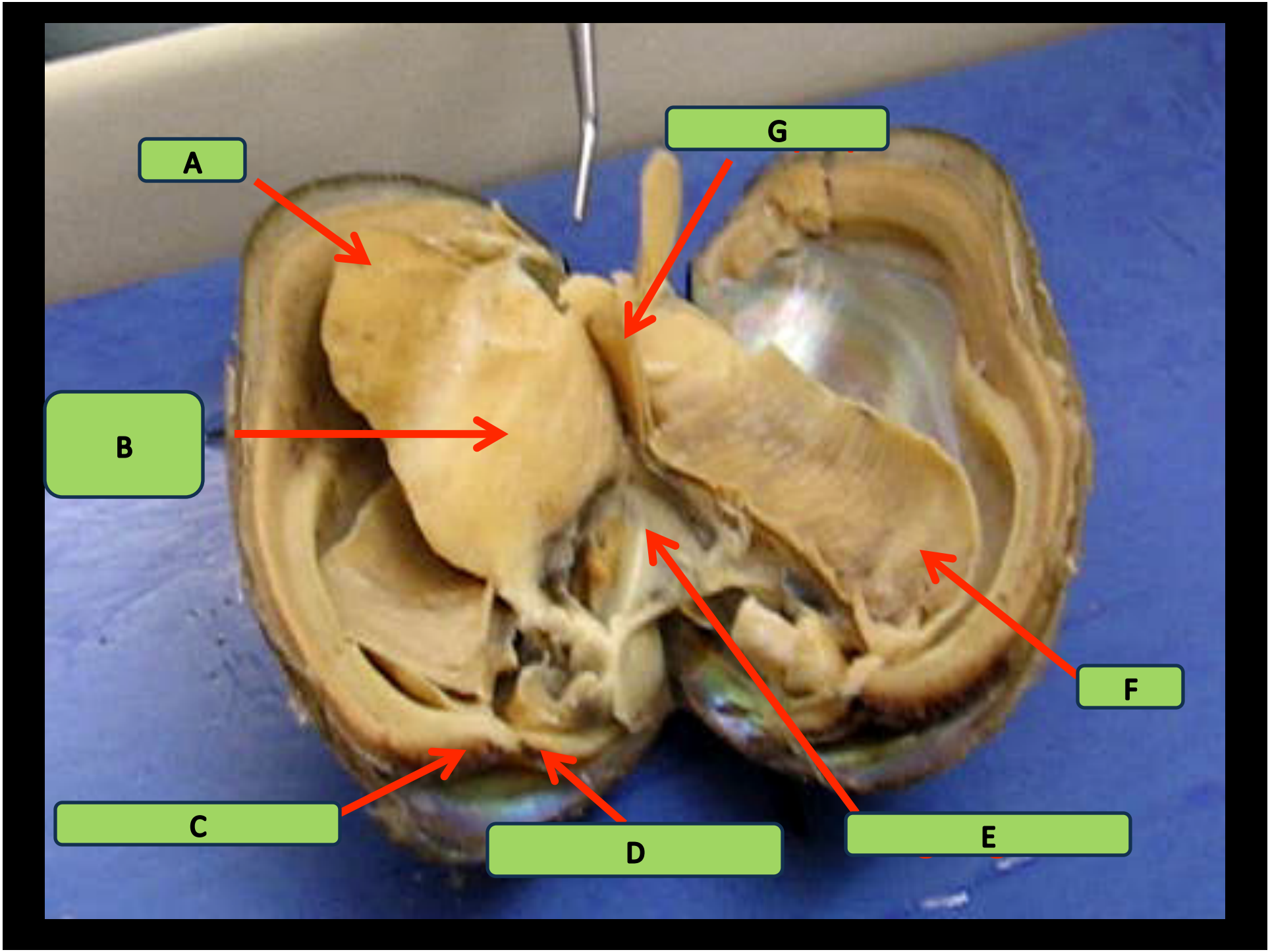
A) ANTENNULE
B) ANTENNA
C) RENAL PORE
D) FIRST MAXILLIPED
E) PALP OF MANDIBLE
F) MANDIBLE
G) FIRST MAXILLA
H) SECOND MAXILLA
I) THIRD MAXILLA

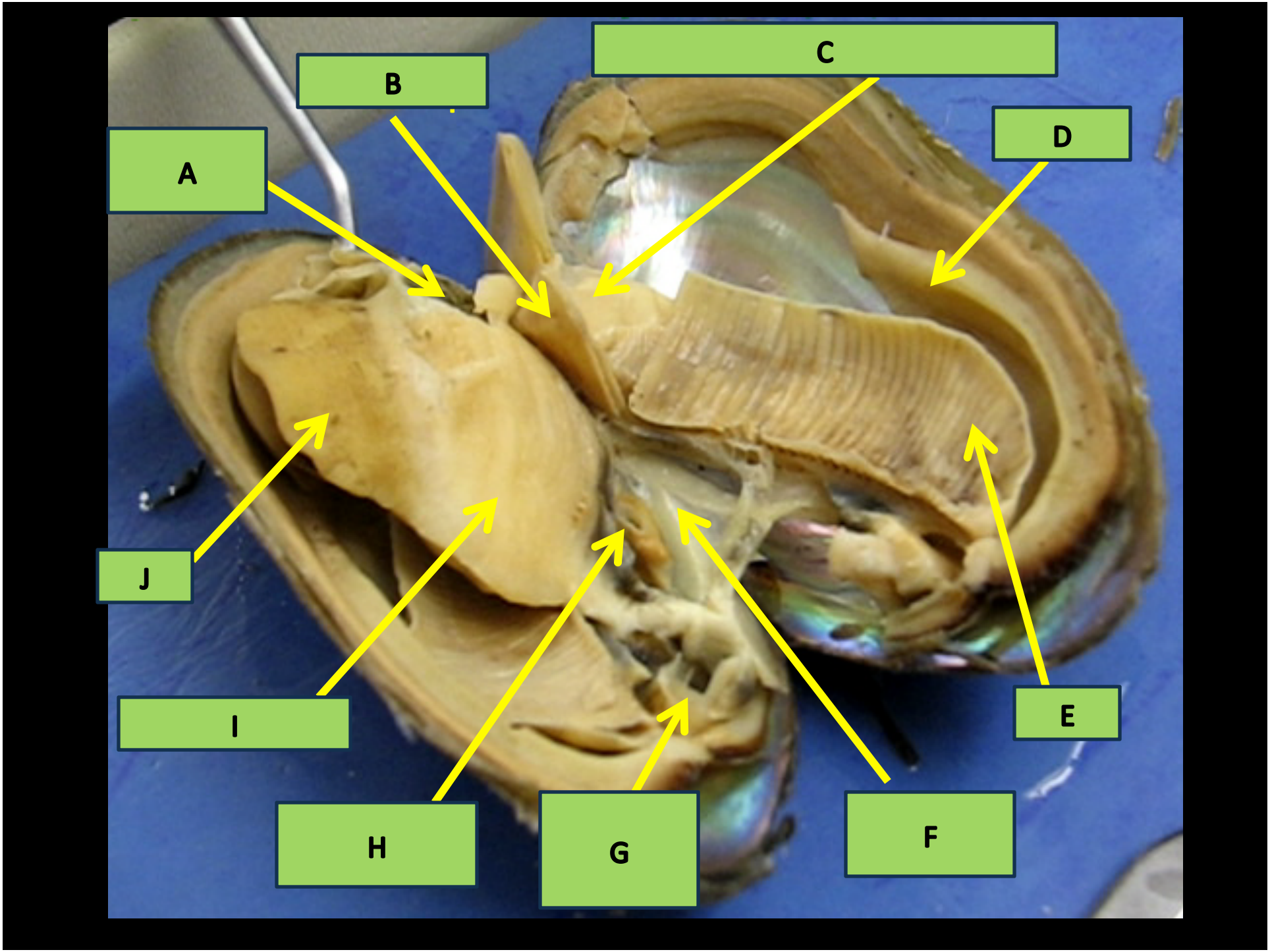

1st MAXILLIPED
2nd MAXILLA
1st MAXILLA
MANDIBLE
2nd MAXILLIPED
ANTENNULE
SWIMMERETS
ANTENNA
UROPOD
3rd MAXILLIPED
WALKING LEGS
CHELA
PROTOPODITE
EXOPODITE
ENDOPODITE

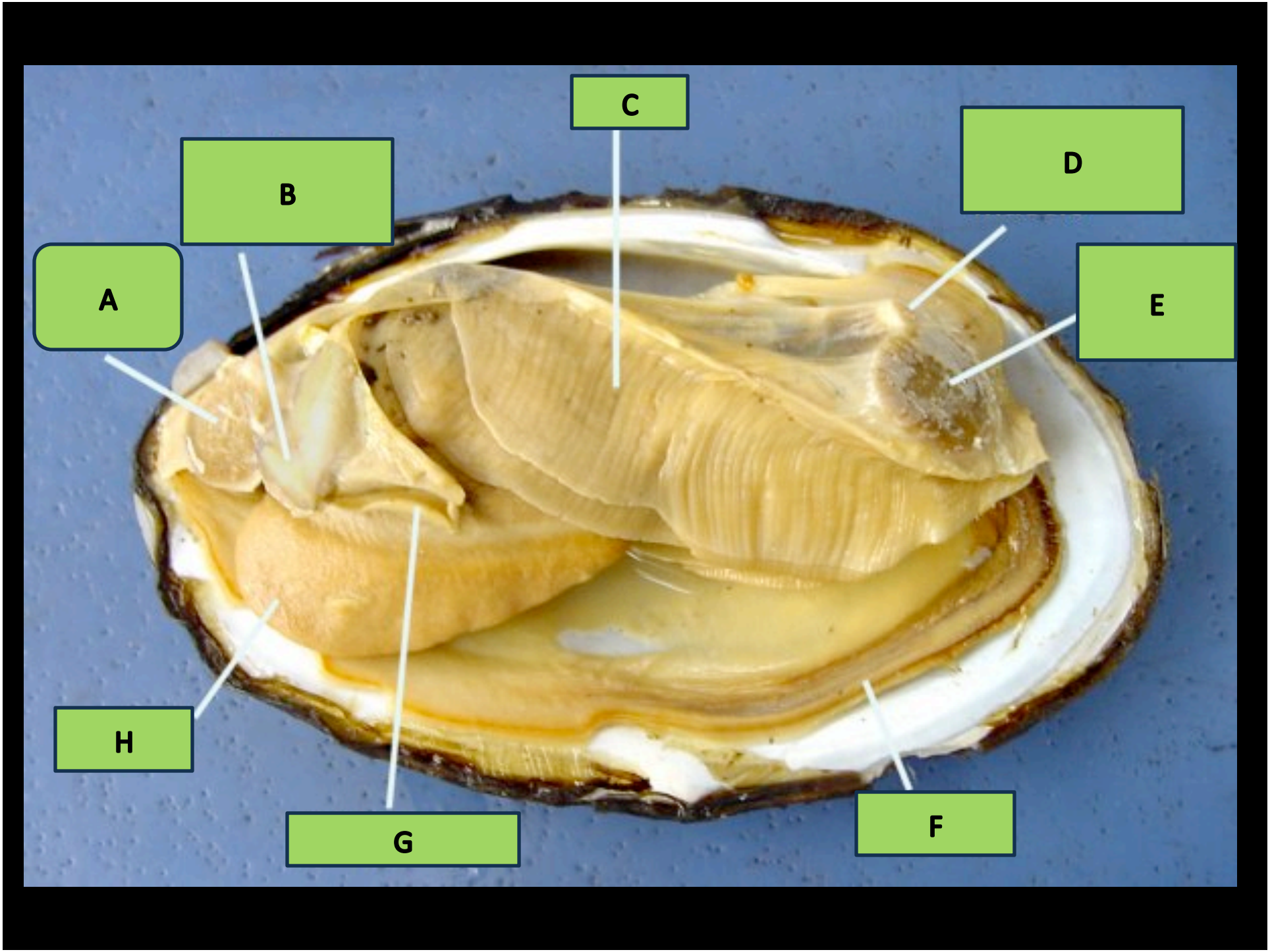

A
G
E
D
F
B
C

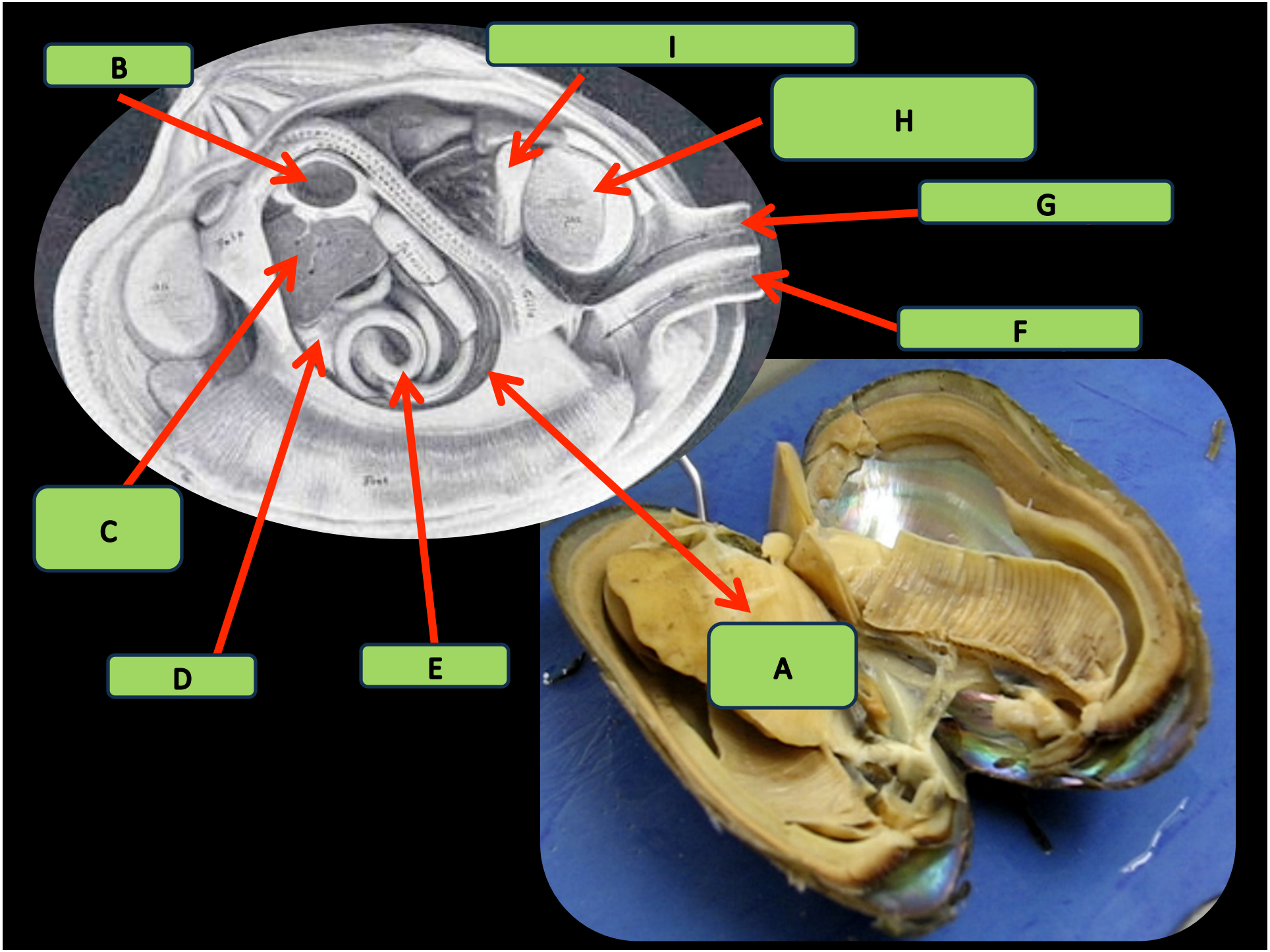

B
K
A
L
M
C
H
I
G
F
D
E
J
8
6
11
12
10
13
19
7
5
5
5
7
7
18
16

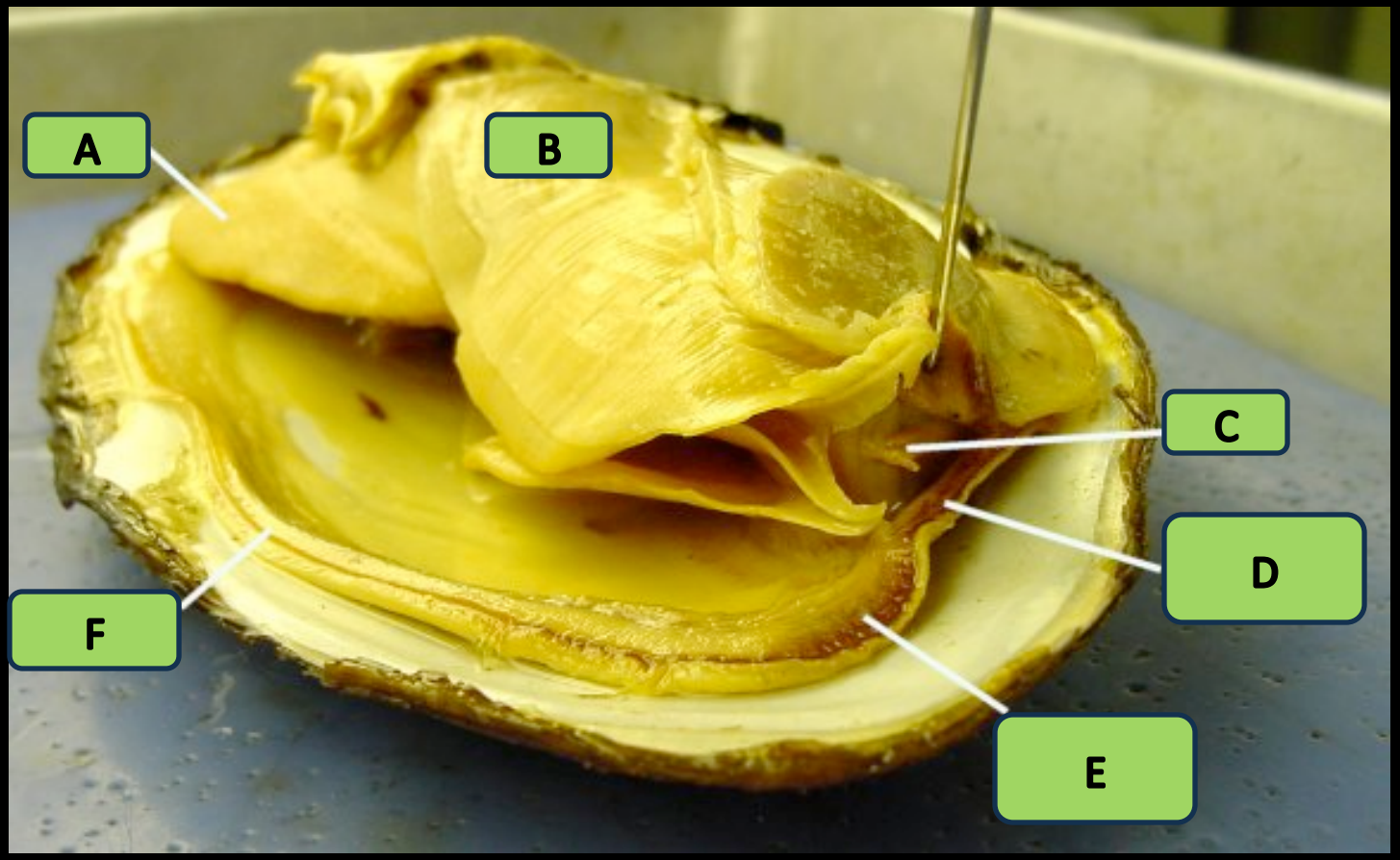

Visceral Mass Opened
A
B
C
D
E
F
G
H
I
J
K
17
3
9
2
7
5
5
5
7
7
1
15


A
G
B
F
C
D
E


A
B
C
D
E
F
G
H
I
J


C
B
D
A
E
H
G
F


B
I
H
G
F
C
D
E
A


A
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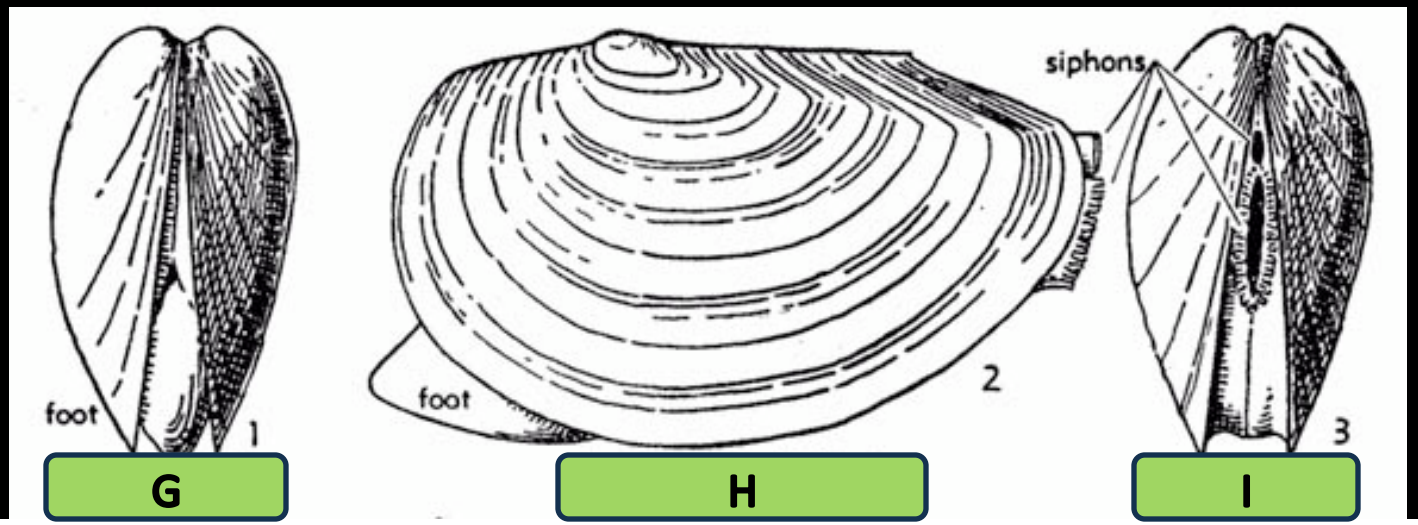
F


foot
1
foot
2
siphons
3
G
H
I

A. Seminal Receptacles
B. Crop
C. Gizzard
D. Instestines
E. Dorsal Blood Vessel
F. Seminal Vesicles
G. Clitellum
H. Cerebral Ganglion
I. Mouth
J. Esophagus
K. Aortic arches
L. Metanephridia