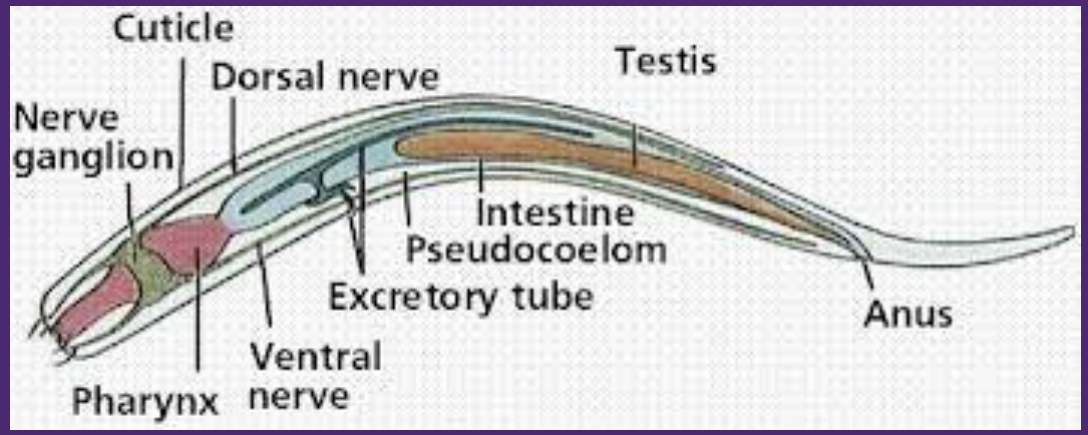
PHYLUM NEMATODA

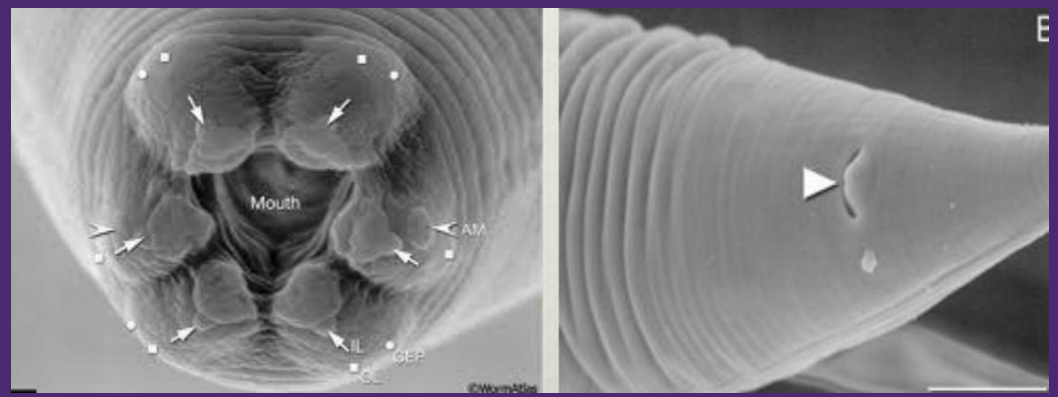
- Roundworms
  - Over 20,000 species which live in almost any ecological niche
- Bilateral symmetry
- Unsegmented
- Most are free living
  - Soil and water
- Some are parasitic
  - Host
- 3 germ layers
- Psuedoceolom
- Complete digestive tract
  - Food moves in one direction
    - Mouth to anus

FORM AND FUNCTION
FREE LIVING

- One of the first animals to have a complete one way digestive system

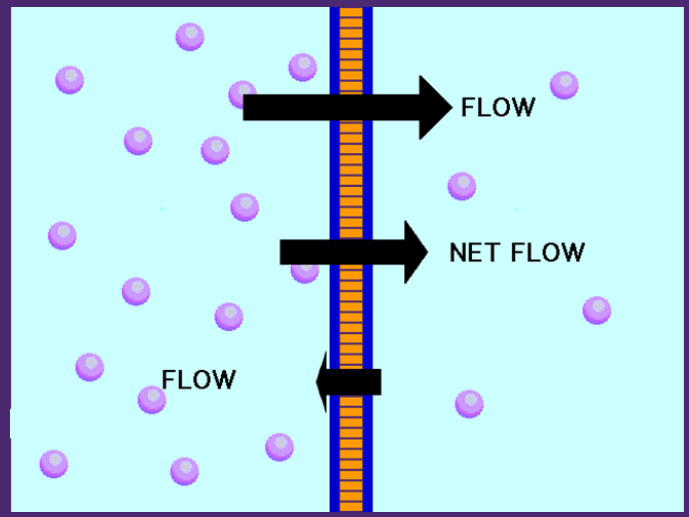


- Feeding
  - Predators
  - Grasping mouthparts /spines
    - Catch and eat small animals
  - Soil dwelling/Aquatic
    - Eat algae, fungi, decaying matter



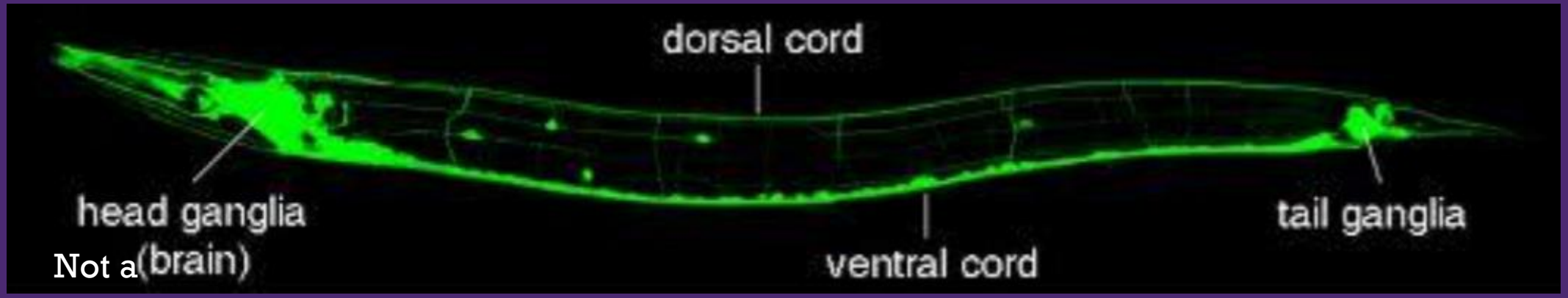
RESPIRATION/CIRCULATION/EXCRETION

- Thin
- Diffusion through the body wall
- No internal transport system



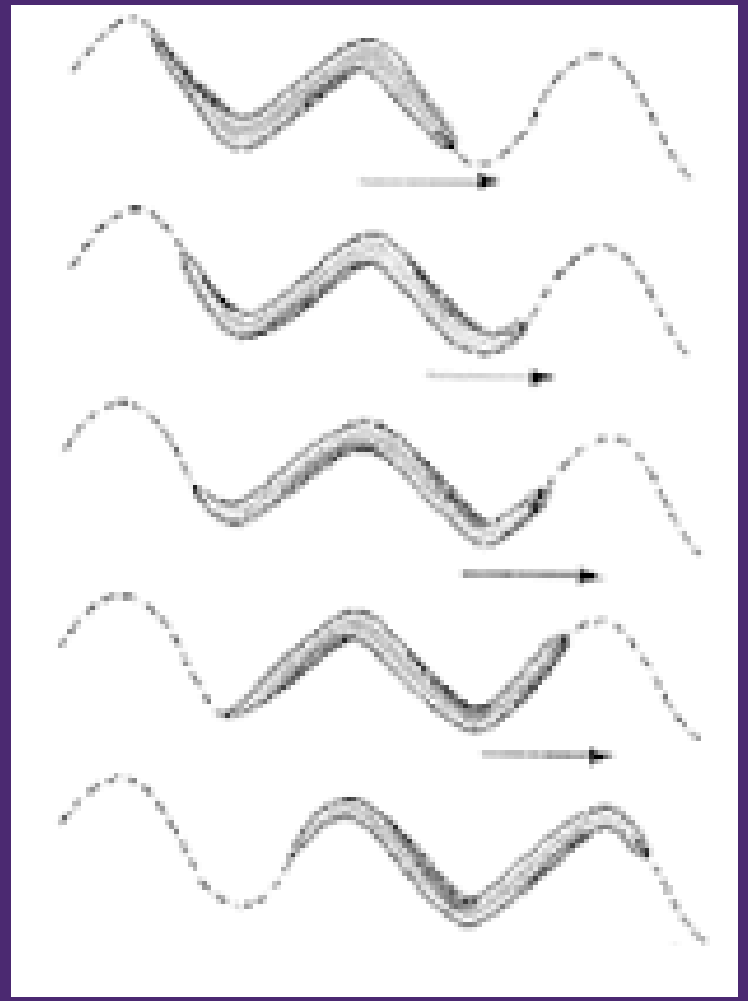
RESPONSE

- Simple nervous system
  - Several ganglia
  - Nerves extend from ganglia in head down the length of the body
    - Transmit sensory information
    - Control movement
  - Several types of sense organs



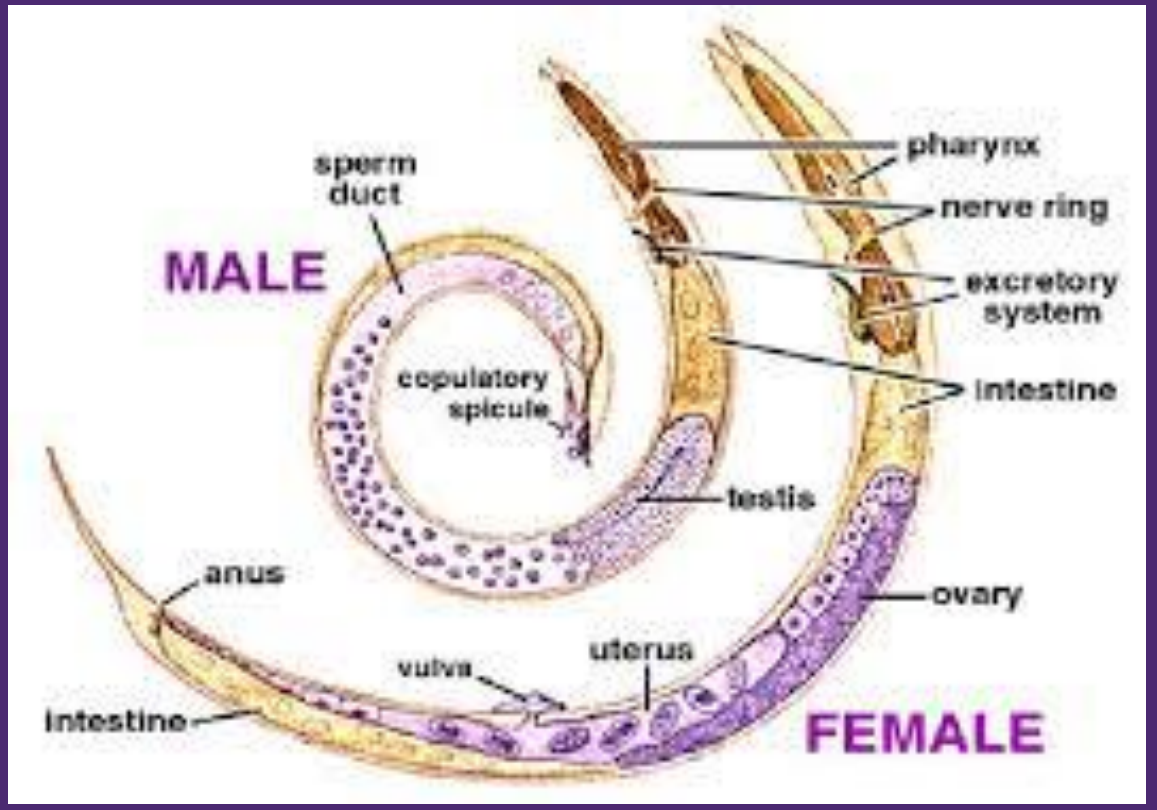
MOVEMENT

- Muscles extend length of body
- Muscles and fluid in psuedoceolom
  - Function as hydrostatic skeleton
  - soil



REPRODUCTION

- Sexually
- Most species have separate sexes
- Internal fertilization
- Male deposits sperm in female



- Parasitic
  - 2 or 3 different hosts

ROUNDWORMS AND DISEASE

- Parasitic Roundworms
  - Trichinosis causing
  - Filarial
  - Ascarid
  - Hookworms

TRICHINOSIS

- Trichinella
  - Live/mate in intestines of host
  - Females carrying fertilized eggs burrow into intestine
    - Release larvae
      - Travel through blood
        - Burrow into organs and tissues
          - Causes terrible pain
          - Larvae form cysts and become inactive
          - Life cycle completed when another animal eats animal tissue containing cysts
  - Common hosts
    - Rats and pigs
    - Humans get trichinosis by eating raw or undercooked pork.