

# Phylum Annelida

The first segmented animals

Size range of 1mm to 3m

# Examples: earthworm and fireworm



<http://www.kidcyber.com.au/IMAGES/earthworms.jpg>



*Hermodice carunculata*, Bearded Fireworm at MarineBio.org

Each Segment contains digestive, excretory, circulatory, and locomotor organs

Some segments are modified for specific functions.

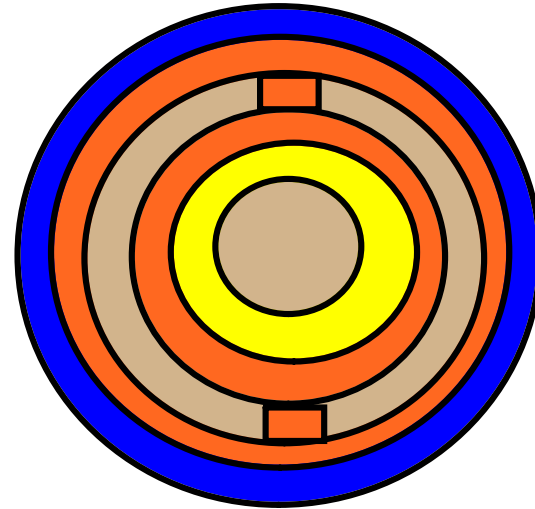
Cerebral ganglion- primitive brain

The brain is Connected to a nerve  
cord that runs the entire length of the  
body

Septa- internal body wall that separate the  
segments

# Characteristics of Annelids

1. Coelom- fluid-filled coelom located entirely in the mesoderm



## 2. Organ systems- closed circulatory system and a highly modified gut

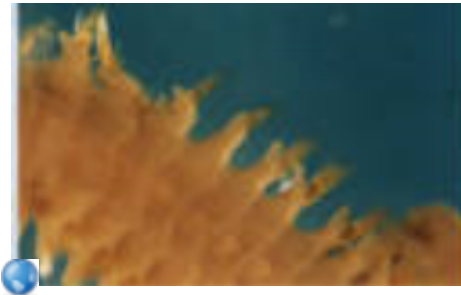
3. Bristles- external bristles (setae)
- a. They are paired on each segments and Increase traction
  - b. Parapodia- some annelids also have fleshy appendages



Hermodice carunculata, Bearded Fireworm at MarineBio.org



Parapodia and the number of setae on each segment are used to classify the organism



<http://dbsdb.nus.edu.sg/epic/biramous2.jpg>

# Class Polychaeta

## Marine Worms

The largest group of annelids

Unusual forms and iridescent color

They have parapodia that are fleshy and paddle-like

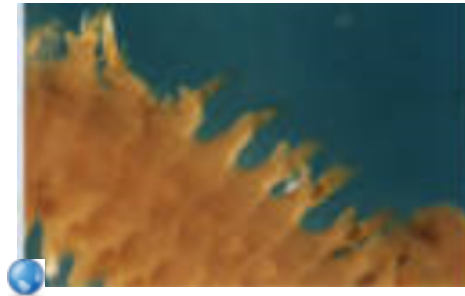


Hermodice carunculata, Bearded Fireworm at MarineBio.org



They are used to swim, borrow, or crawl

They greatly increase the animals  
surface area for gas exchange



<http://dbsdb.nus.edu.sg/epic/biramous2.jpg>



## Tubeworms

Live in protective tubes formed by hard secretions of glands

Sometimes only their head is stuck out of the tube

# Examples: nereis and feather dusters



<http://miljolare.no/virtue/img/nydisk2004/images/008%20Nereis%2006.jpg>



<http://saltaquarium.about.com/clipartfduster2.htm>

## Class Oligochaeta

Earthworms and some fresh water  
worms

Lack a distinctive head region and  
have no eyes

Have light sensitive organ located on  
each end of their body

## Earthworm's Digestion

Eat their way through Soil

They consume their own body weight  
in soil each day

Food moves from the esophagus, crop  
(storage chamber), gizzard (grinds the  
food), intestine (food absorb)

Respiration

oxygen and carbon dioxide diffuse  
through the skin

Reproduction

Hermaphrodites

They do not self-fertilize

Clitellum release a  
cocoon that surrounds that egg



# Brain

Coordinates the muscular activity

Process the info from the light  
sensitive organs

## Class Hirudinea

Leeches

Had blood suckers at both ends of its body

Most are predators or scavengers

Some are parasites on vertebrates or crustaceans

Lack both setae and parapodia

Has a flattened body

The segments are not separated

internally