

## Phylum Phoronida

a small group of 20 species

worm-like animals

2 mm up to 30cm; most <20 cm long

all are marine benthic animals

inhabit shallow coastal waters

may be brightly colored: orange, pink, green, yellow

all secrete a chitinous or leathery tube that is either buried in the sand or attached to rocks or shells

extend front end from tube to feed

a few species bore into mollusc shells or calcareous rock

generally solitary

but some tend to aggregate making the seafloor

→resemble a flower bed

### **Body Wall**

outer flexible cuticle

Animals: Phylum Phoronida, Ziser Lecture Notes, 2009

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epidermis secretes cuticle

layers of longitudinal and circular muscles

true coelom

### **Feeding & Digestion**

**filter feeders** with conspicuous set of modified ciliated tentacles

= **lophophore**

circular or crescent shaped

coelom extends into tentacles

feed on plankton and detritus

cilia direct food toward mouth

with up to 50 ciliated tentacles in two spirals

→ collects food

→ entangles it in mucous

→ cilia move it to mouth

typical U – shaped gut leads to anus outside lophophore

### **Respiration**

Animals: Phylum Phoronida, Ziser Lecture Notes, 2009

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gas exchange through lophophore

### **Circulation**

closed circulatory system with hemoglobin inside blood cells

→adaptation to life in anoxic or low O<sub>2</sub> environments

no heart, some vessels constrict to pump blood

### **Excretion**

paired metanephridia for excretion

### **Nervous System**

simple diffuse nervous system

with nerve ring but no distinct brain

### **Reproduction and Development**

most are hermaphrodites; some are dioecious

→but usually cross fertilize

fertilization can be internal or external

eggs fertilized internally are released through nephridiopore

Animals: Phylum Phoronida, Ziser Lecture Notes, 2009

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in some tentacles brood eggs

free-swimming ciliated larva metamorphoses into sessile adult

at least two species reproduce asexually

Animals: Phylum Phoronida, Ziser Lecture Notes, 2009

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