

# ZOOLOGY

NINTH EDITION



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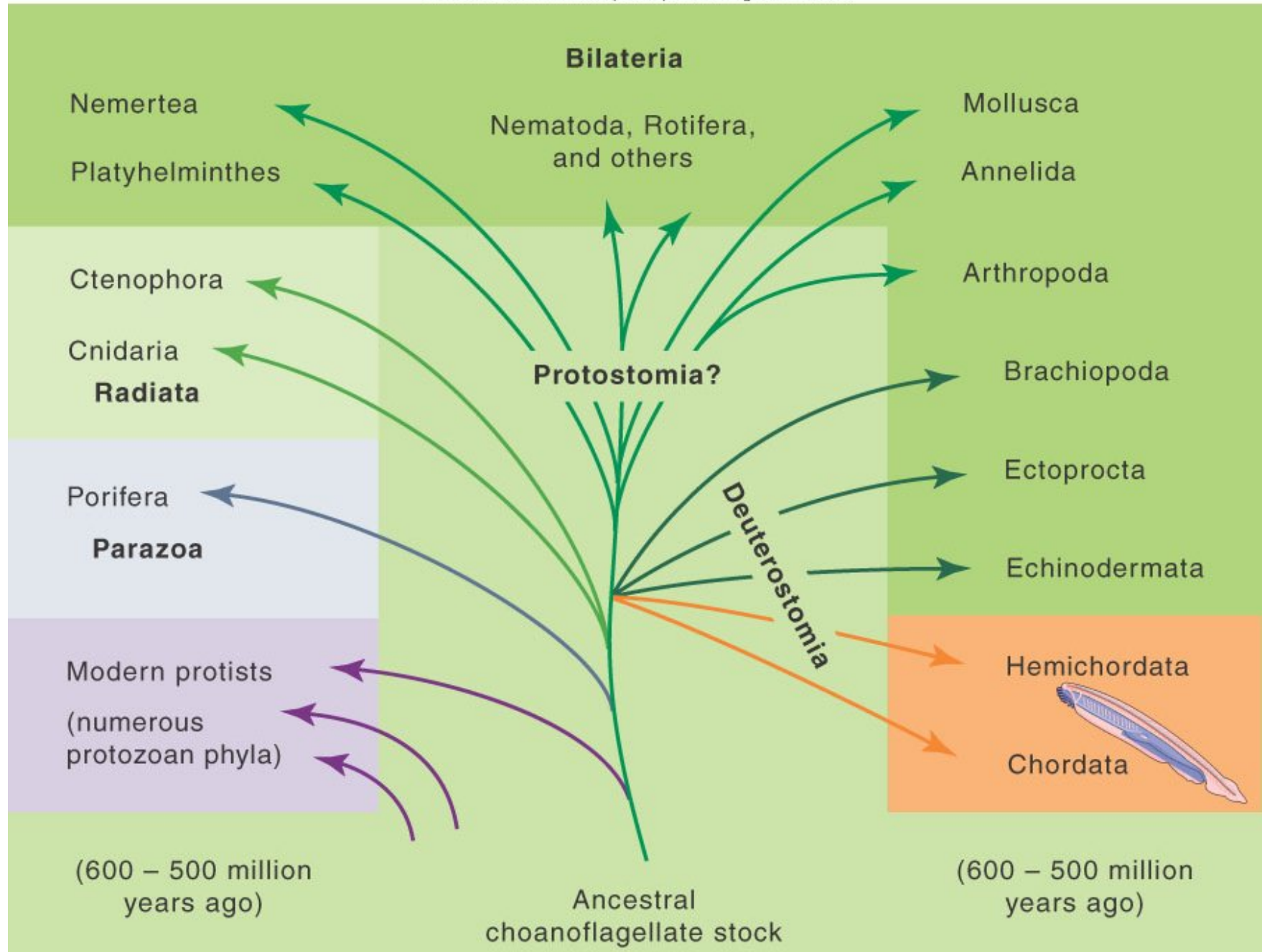
## ***CHAPTER 17***

# **Hemichordata and Invertebrate Chordates**

# INTRODUCTION

- Are the organisms derived from common **diploblastic** or **triploblastic** ancestor
- Both the phyla share **deuterostome characteristics**
- Both the phyla have **pharyngeal slits**

Figure 17.2



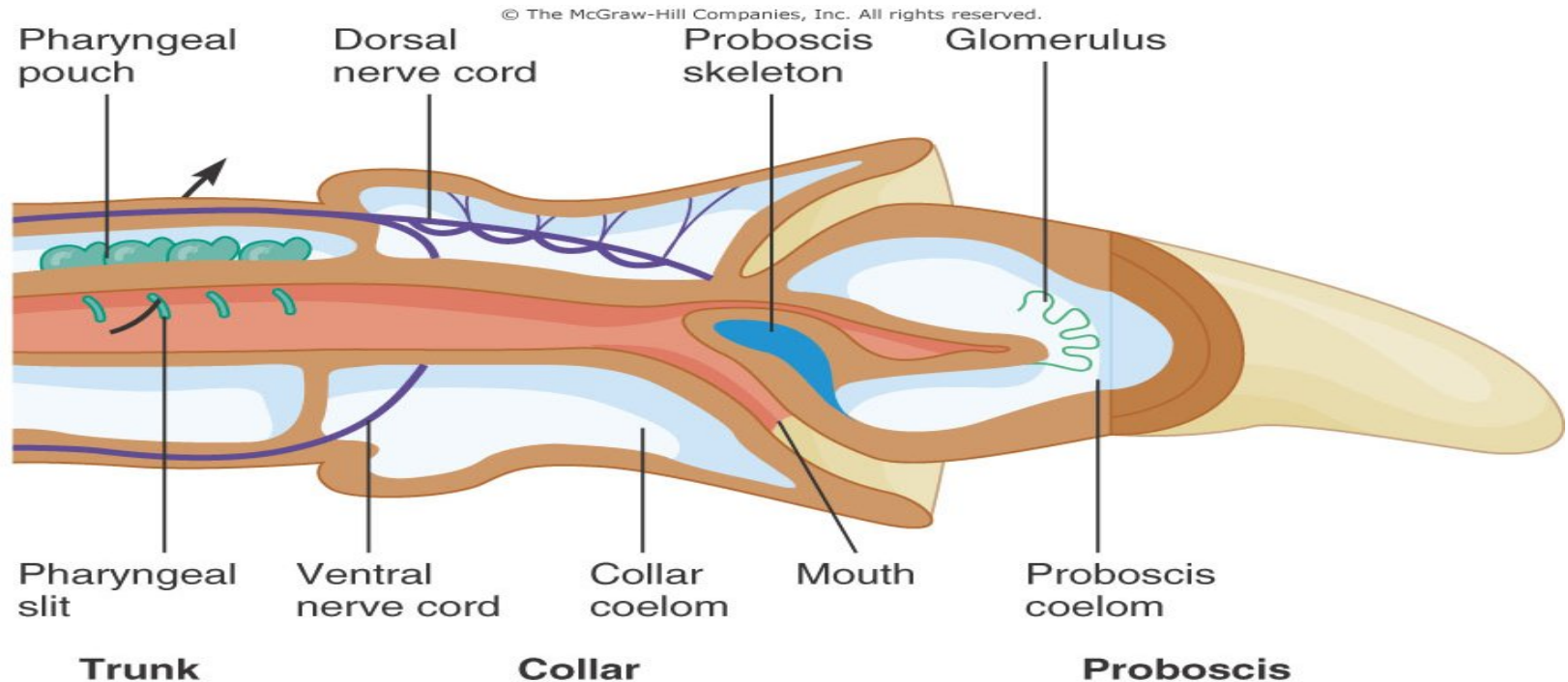
# PHYLUM:HEMICHORDATA

## INTRODUCTION

Include **acorn worms** and **pterobranchs**, are **marine**

### Characteristics:

1) Body consists of proboscis, collar and trunk



# PHYLUM:HEMICHORDATA

## INTRODUCTION

- 2) Coelom well developed
- 3) Pharyngeal slits are ciliated
- 4) Tubular nerve cord
- 5) Circulatory system open type
- 6) Digestive tract complete

# CLASSIFICATION : HEMICHORDATA

Divided into 3 classes

- 1) Enteropneusta
- 2) Pterobranchia
- 3) Planctosphaeroidea

# 1) CLASS - ENTERONEUSTA

- Includes 70 species
  - Live in U-shaped burrows in sand
- Marine dioecious species

**EXAMPLE - *BALANOGLOSSUS***

## 2) CLASS - PTEROBRANCHIA

- Includes 20 species
- Secrete tubes to live in colonies
- Asexual reproduction for colony formation
- Marine dioecious species

**EXAMPLE - *RHABDOPLEURA***



### 3) CLASS - PLANCTOSPHAEROIDEA

- Only 1 species is known to exist

EXAMPLE - *PLANCTOSPHAERA*

# PHYLUM:CHORDATA

## INTRODUCTION

Includes successfully established **45,000 species**

### Characteristics:

A unique combination of **four** characteristics

- 1) Presence of notochord
- 2) Pharyngeal gill-slits or pouches
- 3) Dorsal tubular nerve cord
- 4) Post anal tail

# PHYLUM:CHORDATA

## INTRODUCTION

### Characteristics contd.:

5) Bilaterally symmetrical deuterostomates

6) Digestive tract complete

7) Ventral contractile blood vessels

Is divided into 3 subphyla

A) Urochordata

B) Cephalochordata

C) Craniata

# A) SUBPHYLUM - UROCHORDATA

- Are commonly called as **tunicates** or **sea squirts**
- Includes **1600 species**
- Sessile forms with **sac like body**
- **Monoecious** forms with **metamorphosis** for **development**

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# B) SUBPHYLUM-CEPHALOCHORDATA

- Are commonly called as **lanceletes**
- Includes **20 species**
- Elongate **fish like** forms with **sac**
- **Dioecious** forms

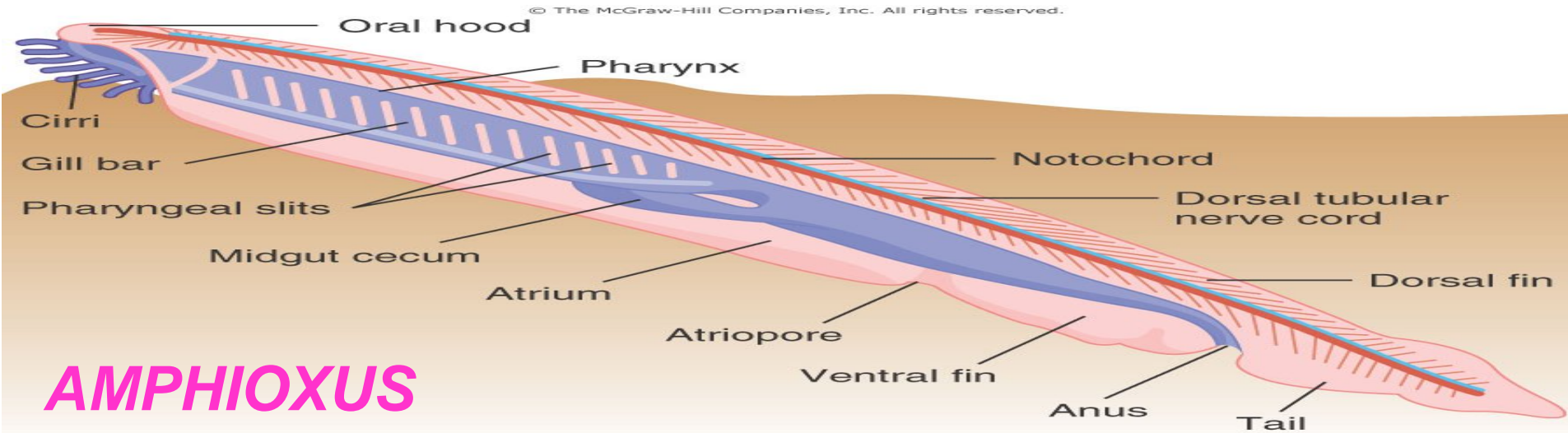


Figure 17.11

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