

PHYLUM NEMATODA (Ch. 20)

1. INTRODUCTION

roundworms - hook, pin, whipworms

- 15-500k species, size micro to 1 m

- organ system grade - coordinate organs
- tube within tube - complete digestive tract (with anus)
- excretory system - flame cells
- pseudocoel - body cavity surrounds digestive tract
 - help organize organs, increase muscle control
 - not fully lined by mesoderm

ecology - most free-living

- all habitats (widest ecological range)
- some predator, scavenge, decompose
- also endoparasite (in all animals)

evolution - did not lead to coelomates

2. REPRODUCTION

asexual - parthenogenesis (unfertilized eggs develop into males)

sexual - dioecious, penile stylet (internal fertilization)
- protandry (males become females)

3. OTHER SYSTEMS

integument - thick if parasitic

hydrostatic skeleton - pseudocoelomic fluid pressure

muscles - longitudinal only (wriggling action)

complete digestive tract - with separate anus

nerve ring - at head, connect 1-2 nerve cords

diffusion - food & oxygen

4. OTHER PHYLA

pseudocoel - evolved independently

Nematomorpha (horsehair worms)

Acanthocephala (spiny-head worms)

Rotifera

Gastrotricha

Kinorhyncha

Gnathostomulida

Entoprocta