

Worms

There are about 20 phyla of worms. It seems that every time they discover a new worm, it winds up in a new phyla. There are three body plans we will look at. They are

Flat worms – Phylum Platyhelminthes

No body cavity, and flattened to allow for simple circulation. There are free-swimming worms such as planaria and marine flatworms, and parasites, such as tapeworms and flukes

Round Worms – Nematodes

More than half are parasites. Common parasitic roundworms include hookworms, trichinosis, pinworms, ascaris worms, and others.

Heartworms and others often infect pets.

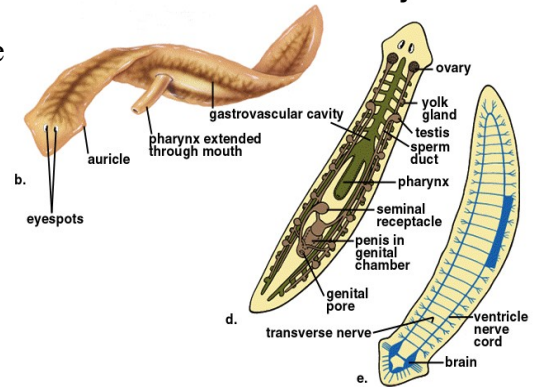
Segmented Worms - Annelids

Earthworms are in this group. These are worms with body segments.

Leeches are in this group, as well as tubeworms. Most segmented worms are considered beneficial rather than harmful.

Copyright © The McGraw-Hill Companies, Inc. Permission required for reproduction or display.

Planarian anatomy



Worms have varied body plans

Flatworms have a simple body plan with no real circulatory system. They have no anus, but one opening. Marine flatworms look like ribbons, but tapeworms look like... tape. Planaria are small (about half an inch). The tapeworm has a scolex for a mouth. Some flatworms have flame cells. These are like simple kidneys, and help the worms excrete waste. So, one worm advantage is the excretory system. Planaria have eyespots, which are concentrated nerves that sense light.

Roundworms have a real digestive system, with openings at both ends. They can live in nearly every ecosystem. They represent 90% of life at the ocean floor. Most roundworms are less than a tenth of an inch long. Roundworms are round (hence the name). They have a pseudocoelom, or a false body cavity. This is an advantage, because organs can grow in a coelom.

Segmented worms have “hairs” on the sides of their bodies that help them move (these are chetae). These can look like legs. They also have a body with a “head” or prostomium (before mouth) where sensory organs are located. Segmented worms have a real body cavity, or coelom. Their nervous systems are more developed, and they have a simple circulatory system.



Reproduction

Flatworms are hermaphroditic. Marine flatworms have two spines under their heads with which they “joust” with another flatworm, trying to pass genes. Some flatworms can also reproduce by budding, or other asexual means.

Roundworms may have separate sexes, or may be hermaphrodites. In some, the eggs are stored within the parent until they hatch, and the young eat the parent. Some nematodes reproduce asexually.

Segmented worms can heal themselves and even reproduce asexually, but most are hermaphrodites and produce sexually.

Advantages over sponges and cnidarians

Excretory system – flame cells (flatworms)

Digestive system – anus (roundworms), coelom (segmented worms)

Circulatory system – simple “heart” that contracts (segmented worms)

