Annelids: Powerful and Capable Worms Fact Sheet

Annelida means ‘little ring’ in Latin.

Annelids are far from being lowly worms: They are impressively powerful and capable animals that have adapted to live in most habitats on earth.

Annelids include: earthworms, polychaetes (marine worms), and leeches.

Features of the Phylum

- Elongate and bilateral with segmentation
  The evolution of segmentation was an important step for the annelids because it provided an opportunity for separate regions of the body to specialize for different tasks.

- A coelom (body cavity)
  A body cavity provides a fluid system against which the muscle system can work effectively. This is why annelids are such effective burrowers.

- Complete circulatory system with capillaries, arteries and veins

- Body wall made of circular and lengthwise muscles

- Continuous gut running from mouth to anus with its own musculature isolated from locomotion musculature

- Bristle-like structures, called setae
  Setae are thin chitinous structures projecting from body (except in leeches) which help the worm move.

Key words and additional concepts

Setae: bristle-like projections from the body that help annelids move. At several places in the video the setae are clearly visible.

Commensalism: an association between two organisms in which one benefits and the other derives neither benefit nor harm. The scale worm commensally lives on the sea star.

Detritus: dead material broken down by bacteria and fungi.

Detritivores: organisms that eat detritus.

Earthworm movement: Earthworms travel through underground tunnels or move about on the soil surface pushing themselves forward by contracting circular muscles,

anchoring their body with their setae and then contracting their longitudinal muscles.

Feather duster worm feeding adaptation: Feather duster worms create a current in the water by waving their tentacles to direct plankton towards the sticky surfaces on the tentacles where food is trapped.

Hot vent tubeworm adaptation: Hot vent tubeworms have billions of bacteria living inside them which secrete food that the worms eat. The bacteria use chemicals in the hot vent water as a source of energy.

Terebellid (spaghetti worm) adaptation: The spaghetti worm's tentacles extend a long way from its burrow to obtain food. Sticky mucus on the tentacles traps detritus and cilia transport this food along the tentacle to the mouth.

Abarenicola (lugworm) adaptation: Lugworms feed on organic material by swallowing sediment while in its burrow and stripping the sediment of its useful organic content.

Leech adaptation: Most leeches prey on small invertebrates, which they eat whole; blood-sucking leeches attach to their hosts and remain there until they become full.