

المحاضرة السابعة / لافقریات / مرحله ثانيه / قسم البايولوجي /

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## Earth Worm / دودة الأرض /

### Phylum Annelida

1 – Earthworms are segmented body (little rings) , some of them are aquatic ( live in the sea ) but most of them live in fresh water habitats and burrow in the sand and damp soil ( Earthworm fertilized the soil ).

2 – Earthworm , its life cycle , fertilized egg , developed encased by mucous cocoon until its ready to hatch to young earthworm ( Juvenile ) .

3 - They are 15000 species , range of length 1 mm - 3m (Giant earthworm in Australia )

4 – Body of earthworm is partitioned by septa , only digestive tract , blood vessels and nerve cords penetrate the septa .

5 - Digestive system have pharynx , esophagus , crop , gizzard and intestine .

6 – Circulatory system ( network of blood vessels with hemoglobin carrying Oxygen ) .

**7 – Nervous system have pair of ganglia above and in front of the pharynx (instead of brain ) plus dorsal nerve cord run posteriorly along with this nerve , ventral nerve cord also back word .**

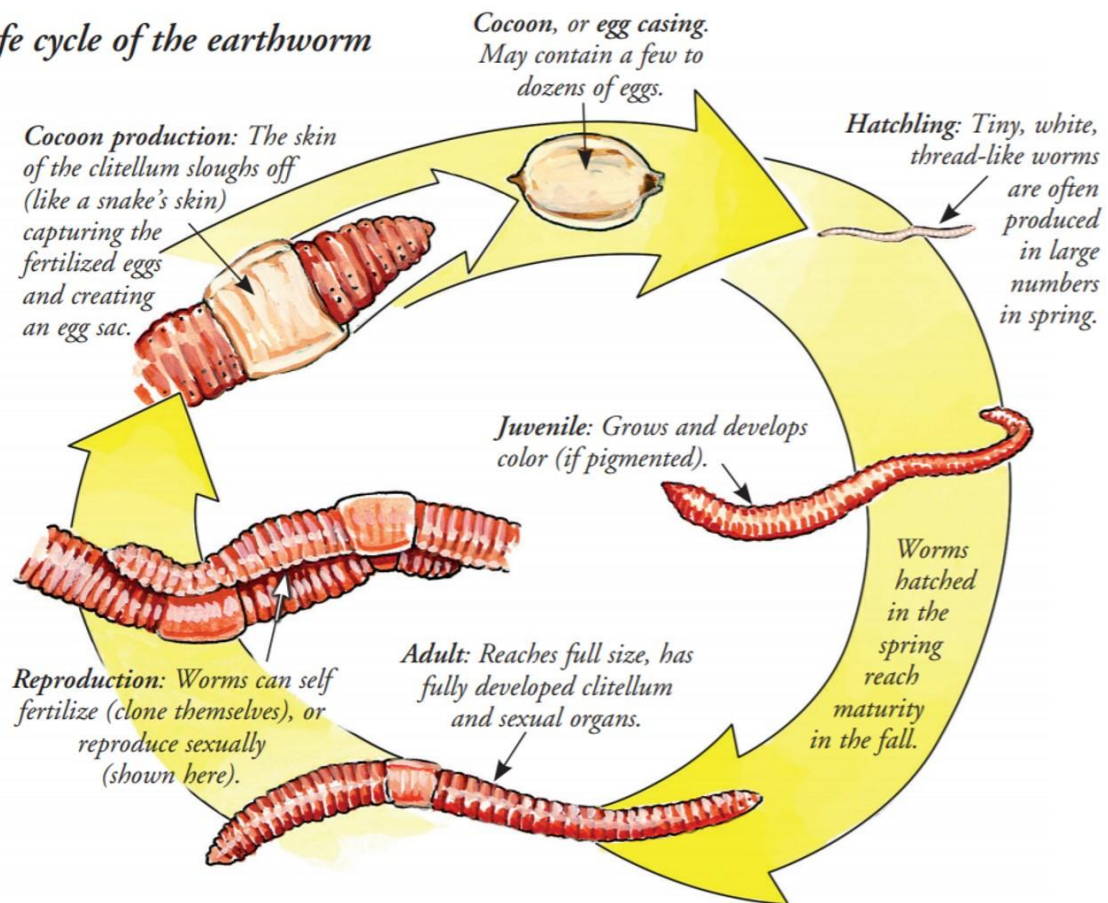
**8 – In each segment of the worm is a pair of excretory tubes ( metanephridia ) to remove waste product from the blood .**

**9 – Earthworms are hermaphrodites but cross fertilization occurs between two worms ( mating ) , exchange sperm .**

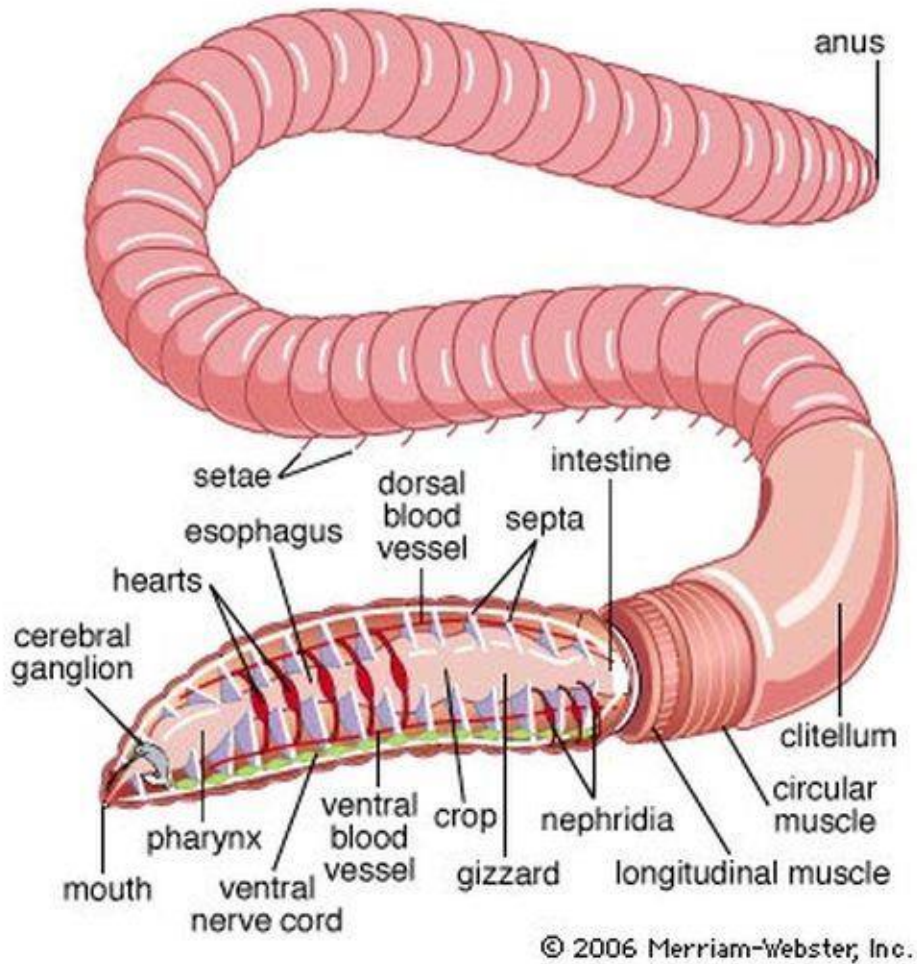
**10 - The clitellum secret mucous to produce conoon , the conoon slide along the body of worm picking up fertilized eggs .**

**11 – Earthworm can reproduce by regeneration of small fragments of the worm .**

## Life cycle of the earthworm



Life cycle of an earthworm © Rick Kollath



## Phylum Annelida

### Leeches : *Hirudes medicinalis*

- 1 - The most species of leeches inhabit fresh water but also land leeches that move through moist vegetation . Many leeches feed on other invertebrates and vertebrates
- 2 - Others are blood sucking parasites that feed by attaching temporarily to other animals Vertebrates , .

**3 – Number of somites 34 superficially subdivided into annuli .**

**4 - Has two suckers ( Muscularized organs ) , one at mouth ( anterior ) of the body , inside ( oral or anterior sucker and another one the posterior sucker , both of them used for locomotion and attachment to the host . In general posterior sucker larger than anterior .**

**5 – Length of leeches 6 - 10 cm , can draw about 4 – 8 ml of blood .**





