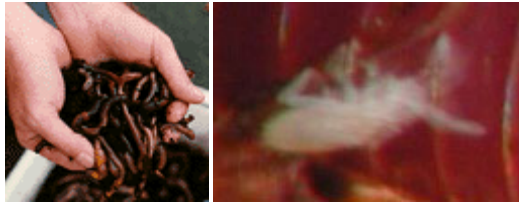




Redworm

Eisenia fetida



[Click here to see this Springtail on a Redworm!](#)

Redworms *Eisenia fetida* — Scientific Classification

- Class: Oligochaeta
- Order: Haplotaxidae
- Suborder: Lumbricina
- Superfamily: Lumbricoidea
- Family: Lumbricidae
- Species: *Eisenia*
- Subspecies: *fetida*

Common names for the *Eisenia fetida* are:

- Redworm
- Red Wiggler
- Tiger Worm
- Manure Worm
- Stink Worm
- Fish Worm
- Dung Worm
- Fecal Worm
- Striped Worm
- Angleworms
- Bandlings



Angleworm is also a common name for the larger earthworm species such as the Canadian Night crawler in northern regions. That is why using the scientific names for worms are less confusing! *Eisenia fetida* are recognized by their alternating red and buff stripes, thus the common name "Tiger Worm".

The *Eisenia fetida* is an Epigeic worm. Epigeic worms live on the surface of the soil or in the top 10 inches or so of the topsoil under the litter layer.

Worms such as the common night crawler (*L. terrestris*, also called the bait worm and dew worm) are Anecic worms. Anecic species build permanent, deep, vertical burrows in cool soils and feed in decaying organic matter and are difficult to raise domestically.

Earthworms are hermaphrodites, meaning they possess both male and female reproductive organs. Sexually mature *Eisenia fetida* have a swollen area approx. one-third of the distance between the head and the tail called the clitellum.

More information from the University of Wisconsin - La Crosse: Worm Anatomy Zoology Lab [nightcrawler segmentation](#) and [nightcrawler organs \(labeled\)](#).

When worms mate they lay side by side with their heads pointed in opposite directions and secrete a mucous that "seals" their bodies together. They then exchange sperm which is deposited on the surface of the skin and then moves to a pore a few segments above the clitellum where it is temporarily stored. Each worm also excretes its own eggs into pores on its skin surface not far from the sperm pore. Once sperm is exchanged, the worms move apart and secrete another thick mucous around their clitellum, which then dries to form a hardened band encircling its body. Once formed, the worm backs out of this mucous band sliding it from its body like a ring being slipped from your finger. As the band passes over the pores holding sperm and egg they are picked up on the sticky underside. Once the worm backs completely out of the mucous band the ends close, forming a tough little cocoon with sperm and egg inside. Fertilization takes place inside this cocoon. The worms will continue to produce cocoons until the sperm they received from their mate is completely used up.



Redworm cocoons in compost

The average incubation period for *E. fetida* is between 32 and 73 days. Newly hatched worms take about 8 to 10 weeks to sexually mature and begin producing cocoons. Once it breeds and starts laying cocoons, it can lay two to three cocoons per week for 6 months to a year. All of this is dependent upon the environment, i.e. moisture, temperature, available food, etc.

If you begin with 1 pound of worms (aprox. 1,000 worms), that pound will become 2 pounds in 3 to 4 months, depending upon conditions. Redworms are marketed by the pound, not by the numbers. Yes, worms mature in 8 to 10 weeks and begin reproducing, but those numbers are not marketable. If you start with 100 pounds of redworms they will double in biomass in 3 to 4 months as long as they are fed well (redworms should be fed at least 3 times their weight a week), have proper moisture (75% at least), and temperatures are between 60 & 80 degrees F.

Optimum temperature for *Eisenia fetida* is 68° to 77° F (20° to 25° C). They can tolerate temperatures from 40° to 80° F (4° to 27° C). They become stressed at 85° F and can die quickly when temperatures reach above 90° F.

Taxonomist identification characteristics

External Structures of *Eisenia fetida*: *Eisenia fetida* length 35-130mm (generally >70mm); diameter 3-5mm; segments 80-120; first dorsal pore between segments 4/5 (sometimes 5/6); clitellum over segments 24,25, 26-32; tubercula pubertatis on segments 28-30; seminal vesicles, four pairs on in 9-12; spermathecae, two pairs in 9/10 and 10/11. ("Earthworms of Ontario" by John Reynolds)

Further Reading These links open a new window and take you to another site.

- [Earthworm Update from UC Davis](#)
- [The Soil Biology Primer Chapter 8: EARTHWORMS by Clive A. Edwards, The Ohio State University THE LIVING SOIL: EARTHWORMS](#)
- [A Virtual Tour through the inner workings of an earthworm.](#)
- [Minnesota Worm Watch's Key to Reproductively Mature Earthworms](#)
- [Earthworm Key - Printable Version](#)

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