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OUR FRIEND, THE EARTHWORM

Few creatures equal the burrowing earthworm as a necessity to better health and greater growth to plant and vegetable life. The earthworm indirectly is of utmost importance to man.

The burrowing earthworm is nature's own plow, his chemist, his cultivator, his fertilizer, his distributor of plant food. The earthworm surpasses anything man has yet invented to plow, to cultivate or to fertilize the soil.

Some 2,500 species of earthworms have been described by zoologists, ranging from microscopic in size to monsters in South America and Australia that grow to seven feet long and more than an inch in diameter.

All are "headless," eyeless and toothless. There are no external antennae or feelers. From end to end the body is composed of ring-like segments.

The earthworm's internal system is highly complicated. In a comparative sense, the earthworm's system does to the soil what the modern refinery does to crude oil.

The earthworm has a multiple system of hearts, minute tubes circling that part of the alimentary canal between the pharynx and the crop. Through a complicated system, these hearts supply blood to all parts of the body.

Minus lungs, the earthworm "breathes" through its moist epidermis or outer skin. His blood corpuscles are colorless and float to the surface of each segment where they absorb the oxygen.

The earthworm is bisexual, that is, it contains both male and female organs of procreation. However, this doesn't mean that the earthworm can go through life and reproduce his kind without need for contact with others of his species, for the worm cannot fertilize its own eggs. Mating occurs at night in warm moist weather. Two worms, leaving the tips of their tails in their own burrows, stretch out and find one another in the dark and exchange masses of sperm. This isn't done in a few seconds. The worms secrete a slime covering over themselves and remain in one another's embrace for two or three hours.

Earthworm eggs hatch in about twenty-one days. The new worm appears as a short bit of whitish thread about a quarter of an inch in length. Within twelve to twenty-four hours, their color darkens. Once hatched, it is a case of each worm for itself.

Certain species of earthworms, particularly those that come to the surface and crawl during wet or rainy weather, are active at night. Other species are active throughout most of the day and night.

The earthworm literally eats its way through the soil, except when it is highly porous. Having no teeth, everything before it, if not too large to swallow, is sucked into its mouth.

Every piece of soil and decayed vegetable and animal matter taken in by the earthworm passes through its digestive system, which is equipped with a gizzard-like organ. Here the food value in the swallowed matter is extracted for use by the worm. The balance is carried by muscular action down through and out of the alimentary canal. These waste materials are called "castings." Worm castings are the feces (manure) of earthworms. They tend to be more neutral than the parent soil, whether acid or alkaline, thus causing the earthworm to be a soil balancer. They are also much richer in nitrates, organic matter, total and exchangeable calcium, exchangeable potassium and magnesium and available phosphorous than the soil from which they were made. These creatures work tons of rich material into the soil every year.

Depositing castings is only a fraction of the good that earthworms do. They pull organic matter, such as dead leaves, down under the soil, and by their digestive juices break it down into a form usable to the plants.

Their burrows go down to eight feet or more below the surface, and they bring up rich minerals that plants need. The burrows improve aeration of the soil, permit the penetration of surface water, and help facilitate the downward growth of roots.

In the soil where the earthworms live, plant and vegetable life prospers. Earthworms are nature's own means of soil building and conditioning. The earthworm by its constant eating, pulverizing what it eats, and excreting it as castings, prepares the soil so that its mineral and chemical quantities are more easily absorbed by the tender roots of plants. The result is that we have a healthier plant, richer in chlorophyll; more fertile, healthier seeds; rapid, even growth; and if it is an edible plant, richer in food elements.

These advantages are the natural outgrowth of the burrowing earthworm. Nitrogen is much higher in the earthworm castings than in the native soil. Nitrogen is the first fertilizing principle to become depleted. But with earthworms functioning in the soil, nitrogen content is increased and will continue to remain as long as there are enough earthworms burrowing in the soil.

To the animal we have been pleased to call "lowly," God apparently assigned one of the mightiest tasks in the world--the task of keeping the surface of the earth forever renewed; the task of forever converting back into topsoil--humus--every bit of waste matter left over by man and beast, as well as every bit of dead vegetation, so that the earth might stay pure and able to support the life that God intends and keep the soil ever in a condition of health, wealth, and perfect harmony.

Of course the earthworm was given helpers to carry out his vast job. Helpers in the form of billions upon billions of tiny micro-organic creatures who do miraculous preliminary work. But the earthworm seems to be the chief executive, the co-ordinator, the homogenizer, and the final deodorizer, purifier and vitalizer of the waste. Not until it has been swallowed, digested, and excreted by him in particles that break down to the size of finely-ground black pepper, has the waste matter actually become earth again.

It was this stupendous assignment that man thought he could perform with man-made substitutes, evolved in the laboratories--lifeless substitutes which were supposed to maintain the life of the soil. No wonder we have come to such a mess soilwise and foodwise.

Commercial fertilizers used today have killed the earthworm and our soil does not have them. Lack of organic matter deep within, hence we have no earthworms.

You can't improve upon nature. Therefore, if we accept the earthworm as an important part of nature--as our friend, a natural friend--it behooves us to do our part to help and encourage the earthworm to do its part.

This is your new, perfect earth, made by nature's perfect earthmaker, the earthworm. Cherish it!

WRM