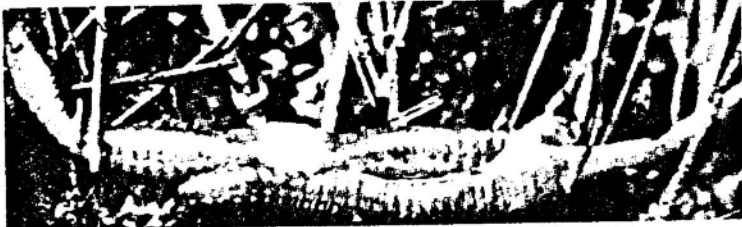


by Hope Sawyer Buyukmihci

EARTHWORMS



I'VE BEEN THINKING about earthworms, and what marvelous, indispensable creatures they are.

Have you ever asked yourself just what earthworms do and how their eating habits affect our lives? In the 1800s Charles Darwin, the English naturalist who presented the theory of evolution, spent 42 years of his life pondering the habits and effects of earthworms. He asked himself, why do objects left on the earth's surface gradually sink into the soil? Why is there always a layer of vegetable mould on top of undisturbed earth?

Darwin made careful observations, took many notes, and at last realized that earthworms constantly bring soil to the surface, acting as small plows to stir and aerate the earth. Moreover, they are continually eating and digesting organic matter in and on top of the soil, regenerating its richness. The grinding of small soil particles releases locked minerals so they become available to plants.

Darwin estimated that about 30,000 worms may live in an acre. Each worm eats 20 ounces of soil in a year. Thus, on a single acre of ground, approximately 15 tons of soil pass through the gizzards of worms each year. Unseen and largely unappreciated, these creatures go about their business of soil-building year after year, making the world better.

Did you ever wonder which

end of an earthworm is the head and which the tail? The head end is pointed, the tail end flat. Male and female mate in a peculiar way. They place sperm in receptacles in each other. After mating, a secreted cocoon is shed, taking with it the eggs of one and sperm of the other. The eggs hatch in two to three weeks after fertilization in the cocoons. The young resemble adults.

Although earthworms do not have precisely the same senses we have, they are sensitive to vibrations and to light, as well as to abrasive materials which might hurt their skin. In a laboratory experiment, earthworms were taught to avoid a path covered with sandpaper and use one having a smooth surface. Like snails, they secrete mucous, and this slippery covering, together with bristles on their underside, enable them to climb up a smooth surface such as glass.

After a rain, numerous earthworms may be seen. Instead of being "rained" down, as some people have thought, these worms have come to the surface to avoid being drowned. As the water soaks in, they return to their burrows.

Worms are not often found today in our farm fields. Insecticides, weed-killers and fertilizers make living for earthworms impossible. They still exist in pastures and sod, where their lives are not threatened by poison or upset

by plowing and tilling.

More and more, as land that was once naturally rich has become barren, we are finding out that the organic way is best. Says Robert Rodale, editor of *Organic Gardening*, "What else do we need to learn about earthworms? That is another important question. My guess is that we will begin to see the answer to that question more clearly when we learn more about what happens when ordinary farmland is converted to organic agriculture. There is growing evidence that, when land is cultivated organically, fertility somehow springs from the earth itself. Fertilizers, even the natural kind, often don't do much to increase yields of plants.

"Could it be that the fertility that earthworms raise from the depths of soil to its surface is much greater and more important than even Charles Darwin realized?"

What happens when earthworms eat is a question still not fully answered. Far more research is needed so that we may understand the vital role of earthworms. ■ ■

NOTE: *Have you been doing some thinking lately? If it is about animals, what you've seen that disturbs or delights you, write a letter to this column. Here's a chance to express your deepest feelings, your most profound thoughts. If you are 12-18 years of age, we would like to hear what you think about animals. We may publish what you say (unless you specifically request that we do not). Sorry, but we cannot answer each letter personally.*

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