

A LESSON FROM NATURE

BIRDS AND SOIL

WHEN one visualises the difference between barren and alluvial soil, it is evident how such factors as the washing away of the top soil, i.e., sheet erosion, must inevitably destroy almost all bird life as it does all living creatures.

Roger T. Peterson in an article appearing in "Bird Lore," the official organ of the National Association of Audubon Societies, U.S.A., entitled "The Good Earth," says:—

"The soil is alive. Men, birds and other creatures depend upon it, so it should be treated well." Then Mr. Peterson goes on to describe a walk in the country by a dozen children accompanied by their schoolmistress, in the following manner:—

A Walk in the Country.

One Saturday morning a dozen members of the Junior Audubon Club took the dirt road north of town, the one that goes to the river. Some of the best "birding" spots near town could be reached by the wood trails that lead off this road. One open glade that ends in a cow-pasture was always good. This morning when they crossed the little brook and this charming spot they were more conscious than ever of the number and variety of things that lived there. Some people could have taken this same walk and, being too busy with thoughts about themselves, would have seen nothing but the grass and the trees—but not these young people. Their eyes were keen and they saw many things. A Flicker flew from a large anthill where it had been grubbing with its long bill; a little party of sulphur butterflies hovered around a wet, muddy spot on the path. A male Song Sparrow sang from a bush top and dashed after another Song Sparrow that trespassed on his territory. Chipmunks scampered under the rocks of an old stone wall. Dragonflies hawked the air, and everywhere there were living things, crawling, hopping, or flying.

It had never occurred to the class until today how much the soil had to do with the lives of these creatures. Many of them foraged

amongst the plants or scratched or grubbed in the debris at the grass roots. The soil seemed to have a great fascination for them.

The teacher commented on this, and one of the boys suggested that they take a sample of the soil so that they might see what was in it. The small trowel and the pail used for transporting plants to the school garden came in handy. A handful of surface dirt and debris from an open grassy spot revealed an ant, a tiny spider, and several other small creatures. This looked promising, and it was dumped into the pail and a section of earth 12 inches long, 6 inches wide, and 4 inches deep was carefully scooped out with the trowel and dumped in with it. They found by probing deeper into the soil that only an occasional grub or earthworm could be found deeper than 3 to 4 inches. Most of the small animal life lived near the surface. One-half square foot of soil would be quite enough to analyse, so a piece of cloth was tied tightly over the pail to prevent anything from crawling out.

What was in the Soil?

The pailful of earth was put on the centre of the work-table and each student carefully picked over a handful of it at a time, on his piece of cardboard. If an insect or worm was found, it was picked up with tweezers and dropped into a little glass medicine vial. With twelve people working it did not take long to run through the whole pail. The pail itself and its cloth covering were carefully examined, too, so that nothing would be missed. Some of the tinier things could be very easily overlooked. There were several very tiny, pale insects that could hardly be seen, so small were they. These were springtails, and they were very hard to catch, too, because they would jump when the tweezers touched them.

When the job was finished, one of the boys offered to try to analyze the contents of the vial, with the help of several good books on insects and other invertebrates from the library.