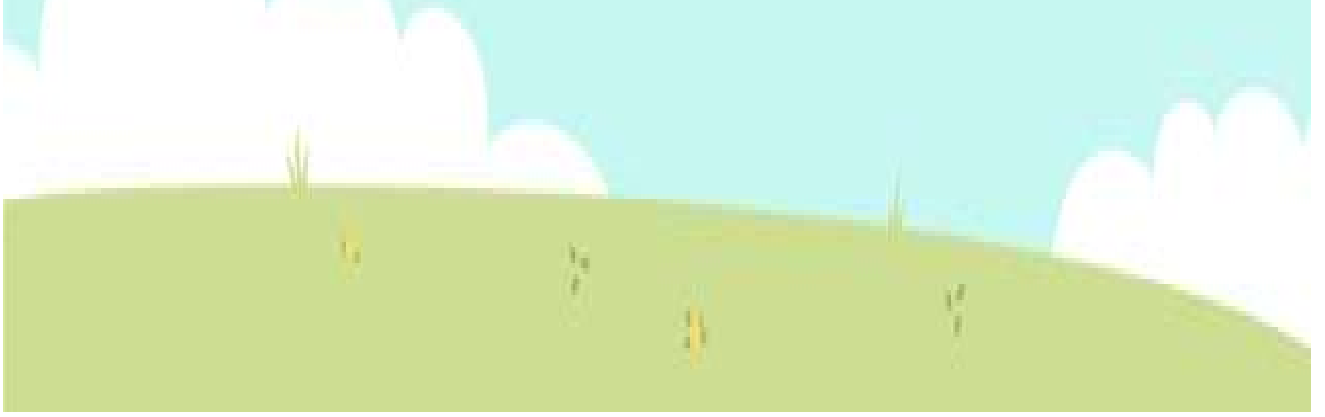
THE ADVENTURES OF LUMBRICUS AND XENYLLA ON THE SALINE SOIL

On a beautiful spring afternoon, a restless worm named Lumbricus and his friend Xenylla, who was a curious springtail, were placidly contemplating the surroundings in the Healthy Soil. There, insects, mites, mollusks, small mammals and the rest of the inhabitants lived harmoniously and formed a peaceful community where everyone knew and helped each other.

These little friends were always sharing pleasant moments and believed themselves to be detectives since they liked observing their neighbor's customs. For this reason, they always carried a field notebook to take notes and with which they felt like real investigators.



Thus, in their notebook they began to write down and draw neatly everything Healthy Soil's inhabitants did, what they ate, how they moved and how the communication among them was. At first, this activity seemed a very simple task, but as time passed everything became more complicated, due to the great biodiversity.

“Would they live in a society with secret agents? Were their neighbors suspected of something and they hadn't yet realized? they wondered.

They began to investigate in further detail and found that everyone worked, that had different functions and, with what they did, contributed to make their community healthy, varied and harmonious.

A few days later, Xenylla asked Lumbricus “What if we investigate other regions? and begged “Please, let’s go to explore beyond the limits of the Healthy Soil”.

Lumbricus wasn´t sure it was a good idea but at Xenylla's insistence, she finally agreed, thinking about having a great adventure and how fascinating it would be visiting places which they had never been before.

They began the journey advancing underground through tunnels, channels and pores that left plant’s roots and also through galleries made by animals that lived in soil.

After a long walk they felt like eating and drinking. Fortunately, they were still within the limits of the Healthy Soil so there was plenty of food and water to calm the hunger and quench the thirst.

After the brief break, they went on walking and as they advanced were surprised to see how the appearance of the territory changed. The soil was no longer the same, it was wet below and dry above and in addition there were very few roots and organisms.

“What is going on here?” they wondered. So they decided to come to the surface and investigate.

Outside, the sun´s rays were intense and suffocating, so Lumbricus and Xenylla began to perspire but unable to find shelter to protect themselves, since there was practically no vegetation or plant residues on the ground. Suddenly, they noticed white crusts covering part of the soil surface and that the few plants growing up were wilting, apparently due to lack of water, in spite of the soil's moisture.

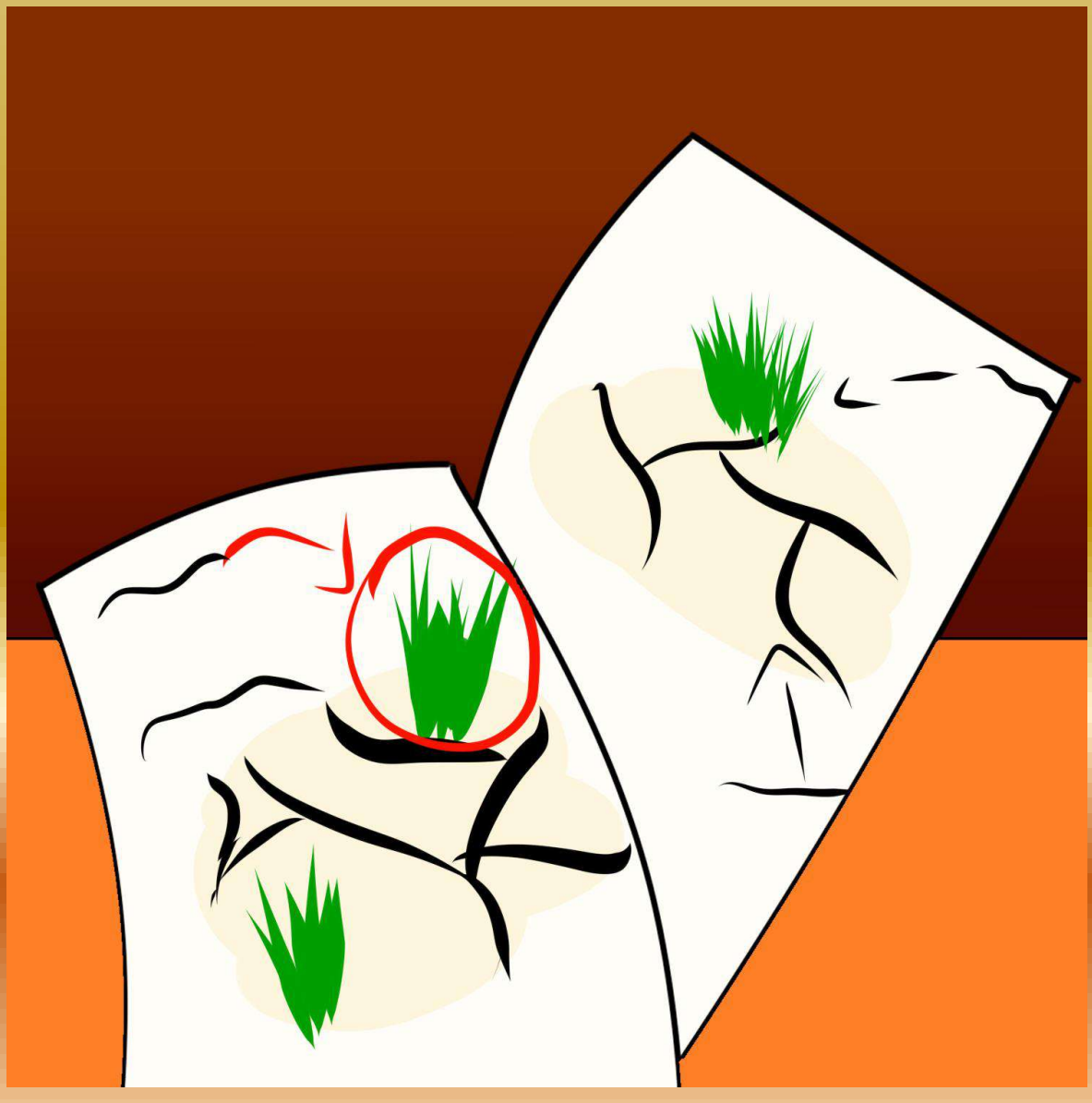
“Where will we be?” “What’s going on with these plants and this soil?”

They approached cautiously those crusts, trying to find out whether they had any particular aroma or flavor and realized that they were actually small crystals covering the soil. When Xenylla tasted one of them she immediately exclaimed “How salty it is!”

“Don't eat anything you don't know what it is! You can get intoxicated! warned Lumbricus.

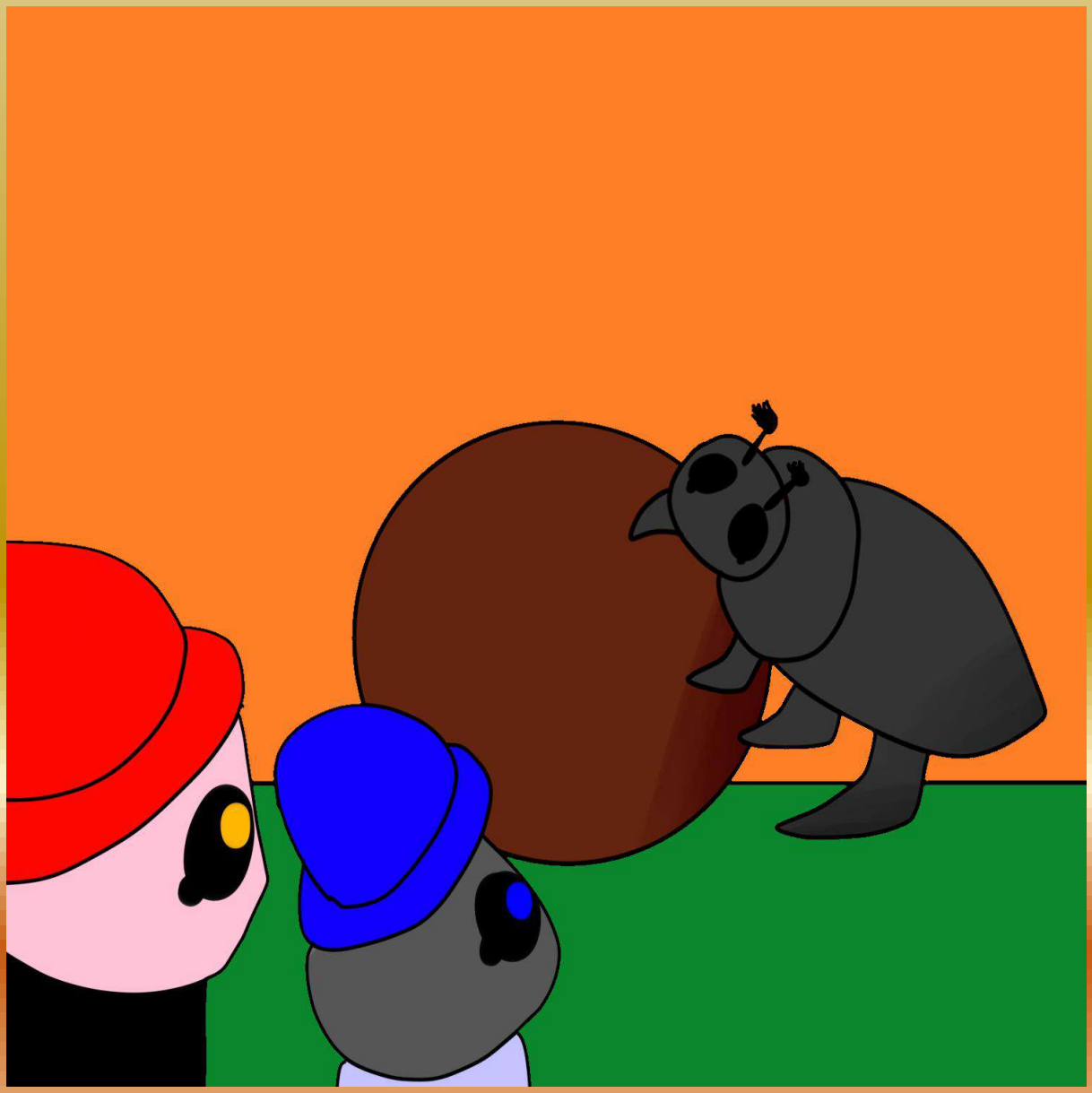
As they kept on walking across that region, they noticed that more and more grasses surrounded them.

Suddenly, they saw at a distance an old beetle carrying a large dark ball between its legs. Lumbricus and Xenylla quickly approached to him with notebook in hand to obtain information.

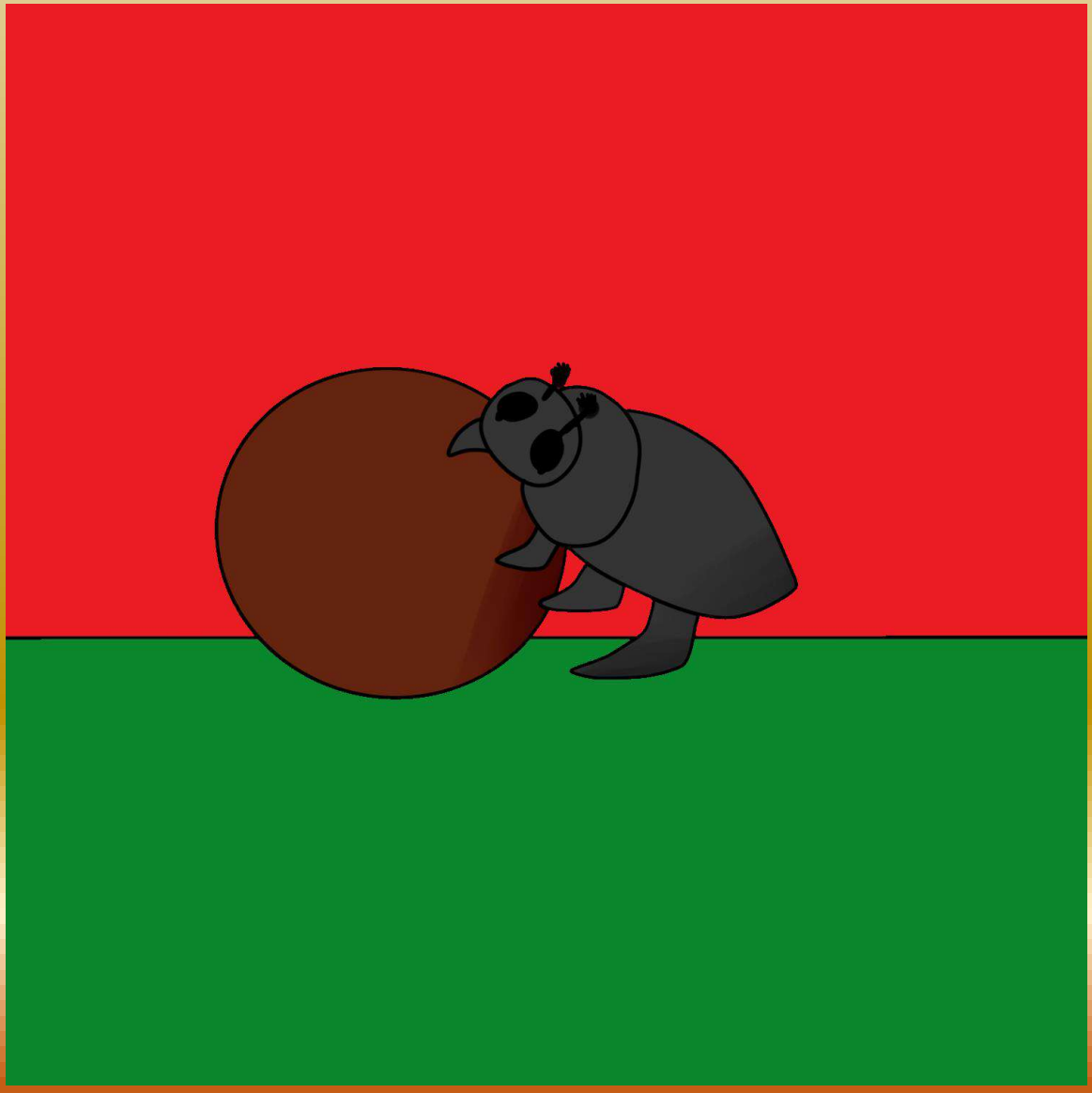


“Good morning! We are investigators coming from the Healthy soil. May we ask you some questions?

The beetle nodded shaking his head and looking at them complacently.



“Hello! My name is Dung Beetle. I feed on manure that I knead into a ball, like this one you see here. I carry it with me everywhere to bury it later and feed my family underground”.



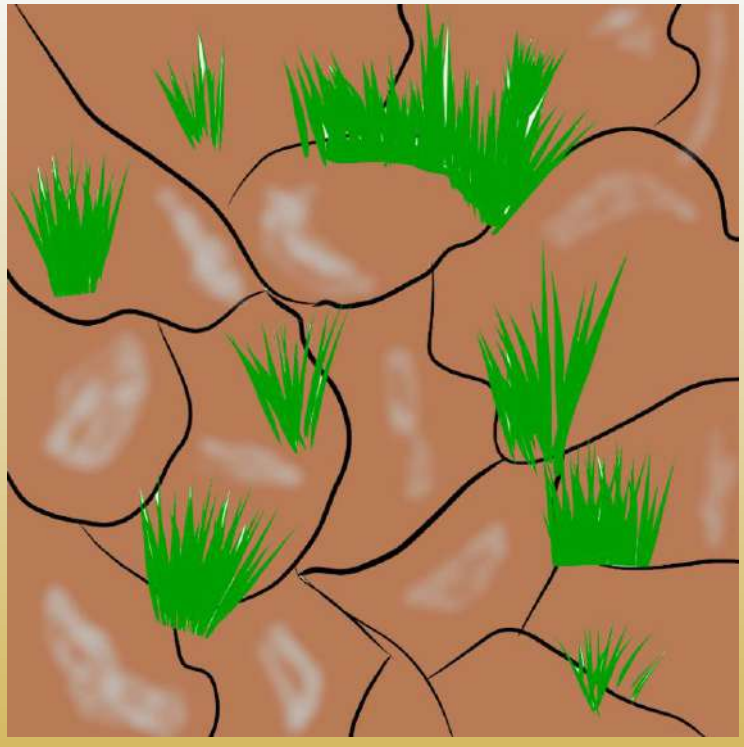
“How interesting!” exclaimed the little friends.

Xenylla told Mr. Dung Beetle that they were getting to know new regions and that they would like to know more about this place.

“Well, I´m the one who can tell what is happening around you. Take note kids”.

“Many years ago this place was a paradise as there were wild plants, many different trees and a lot of food for us. One day, man got here with his machines and swept away everything that was above and below soil surface. It was devastating!”

“Instead of natural vegetation, grew a single species crop wherein plants at first seemed healthy and vigorous but over the time they turned yellow and wither. Meanwhile, white crusts appeared on the ground, spreading more and more”.



“My family and I found out that water and nutrients present beneath soil´s surface were absorbed by trees through their long roots, but when trees were cut down they left bare ground. Due to high temperatures, water and solutes rose by capillary action closer and closer to the soil’s surface, from where they easily evaporated leaving white crusts”.

“Fortunately, after a time, a large grass that seemed tolerating saline soils was sown. We came to know it was called Rhodes grass and could recover a soil degraded by salts”.

“We also noticed that in places where excess water stood on soil surface, drainage ditches were dug. That is how white crusts began to disappear while Rhodes grass began to cover soil, which gradually recovered its health” concluded the old beetle.

Lumbricus and Xenylla looked at each other satisfied with their investigation about saline soils.

They thanked Mr. Dung Beetle and began the long walk back to the Healthy Soil, using large leaves as umbrellas. As usual, they carried their notebooks where they would continue to write down everything they saw during the journey.

Once at home, they analyzed and studied all the information collected and concluded that the saline soil they visited was in recovery process thanks to tolerant crops like Rhodes grass and other soil management strategies.

They also became aware that man can promote soil degradation but also repair the damage caused and take care of it. That´s why everyone in their territory must: "Halt soil salinization, boost soil productivity“.

True tale, invented tale, tell yours that this is already finished.