

know hatch out of eggs that moths or butterflies lay, so they are really baby moths or butterflies although they do not look a bit like their fathers and mothers; instead they are ugly, fat worms.



Tent caterpillars spin a silken tent which serves for shelter at night and when the days are rainy. A tent caterpillar stays inside its tent while it molts or sheds its skin. A caterpillar does not have any bones to keep its body firm. The skin is the firmest part of the body and is a sort of skeleton which it wears on the outside. When its skin gets too tight, it splits open down the back like a rip in a seam, and then the caterpillar crawls out through the torn place. Its new skin stretches enough so that the caterpillar can grow one size larger before it needs to molt again. A caterpillar needs a quiet place while it is molting, and a tent is a very good home at such a time.

Caterpillars that do not live in tents often spin thin silk mats just before it is time for them to change their skins. They tangle the claws of their creeping feet into the fibers of the mats, and then they do not fall while they are molting.

There is one time in its life when almost every kind of caterpillars spins some silk and this is when it is ready to turn into a pupa. (Pupa is what an insect is called while it is resting and waiting for its wings to grow.) A pupa is a quiet helpless thing that cannot eat or spin or walk. When a caterpillar is about to become a pupa, it spins a cocoon where it waits for its wings to grow.

A cocoon is the silken room the caterpillar spins when it is through with its leaf-eating growing days and is ready to change into a moth.

Tent caterpillars spin a silken tent which serves

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## PLANTS ABOUT US

### Plants and Their Enemies

Plants like men and animals have their enemies, too. Our enemies are diseases, other war-like human beings and our bad habits. Among animals the stronger and larger ones feed on the smaller and weaker. With plants there are a thousand things that threaten the well-being and even the life of every tree and shrub and lowly herb.

Too much heat or too little, works great harm to plants. Then there are wasting diseases caused by other tiny plants called fungi and bacteria. Many animals as horses and cows and goats live by grazing the herbage and grass or browsing the foliage of trees and shrubs. Of course they greatly injure the plants they feed upon and therefore many plants are in one way or another protected against such attacks. That is why some plants are guarded by sharp prickles, pointed thorns or fine hairs that burn when they get into the flesh. What plants do you know of are protected this way?

Besides the large grazing animals, there are smaller enemies—insects and the like, that injure plants by eating holes in their leaves, or by feeding upon the delicate petals of the flower. But there is hardly a plant that has not some clever way of its own for protecting itself against the enemies of its kind. After all an enemy, like

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## THIS EARTH OF OURS

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spreads in bands of red, orange, yellow, green, and blue but before you can fully satisfy your eyes with its beauty, it has disappeared just like a dream. But in your mind must be the question: what causes a rainbow to form in the sky?

When you are at home, see if you can find a triangular piece of glass; then hold it in a darkened room and allow a ray of sunshine to pass thru it. You will find out that a band of many colors will come out and if you name them you will have: red, orange, yellow, green, blue and two other shades of blue-indigo and violet. These are said to be the seven colors of the spectrum.

Sunlight is not really one white color but is a mixture of all these colors. Light ordinarily travels in a straight line but the triangular piece of glass called a prism owing to its shape breaks up the white light into its various elementary colors and they are spread out in a rainbow-colored band.

Coming back to our natural rainbow, it is an immense spectrum formed by the sunlight falling on the raindrops, but you can only see it when the sun is behind you and the shower of rain is in front of you. It is because every rain-drop is a ball that the bow is curved.

Long ago when people did not yet know what caused a rainbow, they had many legends to explain it. They said that if you could reach the end of the rainbow you would find

## YOUNG WRITERS

*(Continued from page 163)*A STORY OF A POOR  
FARMER

Once there lived a poor farmer. He was so poor that he worked hard everyday. Even then he had not enough money to support his family.

In the village where this poor man lived there was a rich family. They had a large garden beside their house. They had planted many kinds of vegetables and fruits. They had a servant to watch their garden every day.

One day, this poor man passed by. He saw the garden with several kinds of ripe fruits and vegetables. He wanted to get some of them. He got a basket and jumped over the fence, while the gardener was sleepy. He entered the garden and hid under the trees. He began to think, "If I could steal a basketfull of those fruits and vegetables, I would sell them. I shall use the money to buy a hen. When the hen will have chicks, I shall sell them. I shall use the money to buy a pig. When the pig will have little pigs, I shall exchange it with a horse. When the horse has little colts, I shall sell them, and with the money I shall buy

a pot of gold there. Others said that the rainbow was the bridge to heaven. Do you know of other explanations of the rainbow that you have heard old people give? Tell your classmates about them.

## PLANTS AND THEIR

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criticism has the healthy effect of keeping us awake. Human beings as well as plants and animals have to be alert and on the look-out for these enemies and this danger causes them to put out the best in them to provide themselves with means of defense and ways of outwitting their foes. In the game the best man wins and the fittest animals and plants survive.

some cows. When the cows will have calves, I shall sell them all. Then I shall have much money. I shall be able to buy a piece of land and build a new house. On the side of my new house, I shall make a large garden. I shall plant many kinds of fruits and vegetables I shall watch my garden every day so that the thieves can't get in. I shall be a rich man." While he was thinking about that he felt so happy that he spoke very loud. The gardener woke up and looked for what had happened. He ran toward the man and found out that the farmer was stealing fruits from the garden.

He caught the farmer and took him to the municipal building. After the poor farmer had promised that he would not do it again, the municipal president set him free.

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