

ELEMENTARY SCIENCE SECTION**THE BAT**

By RUPERTO SARMIENTO *



HAVE you ever watched the little black "birds" flying about just at dusk each evening? Do you know what these "birds" really are? They are our friends, the bats.

The bat is not at all nice to look at. He is an ugly creature, and, although he is timid, he is fierce when angry. He hunts for food at night and sleeps in the daytime. If you see him when he is asleep, you will see a queer sight. He hangs by means of his toes, and rests that way with his head down. In this position he stays all day long.

As soon as it begins to get dark, he wakes up, leaves his sleeping quarters, and begins to help us. As he flies about, he is helping us. Perhaps you are wondering how such an ugly creature could help us. But he does. As he flies about, he catches and eats hundreds of harmful insects such as moths, roaches, mosquitoes, and the like.

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After a while he goes back to his sleeping quarters which may be in a cave, in a hollow tree, in thick bushes, or some dark part of a building. It is interesting to know that in some countries people build places for bats to stay. These are called "bat roosts."

A Frenchman once had a pet bat. He taught his pet bat to eat from his hand and to take pleasure in being petted.

You may wonder how anyone could like an ugly bat as a pet. He does not look very intelligent as he hangs upside down. But wait; you'll admire him more when you learn to know him better.

Do you see those strange wings of thin, dark skin which the bat wraps around him like a cloak? These are perhaps the most delicate sense organs in the world. Take the bat in your hand. He will not hurt you if you are gentle and avoid that frightened snarling mouth. You'll feel the small creature trembling all over. That is because, to those sensitive wings, the touch of your hand is like a rasping

file, rough and disagreeable.

Those wings and his large, vibrating ears are the mystery and wonder of the bat. They enable him to fly in the darkest night, through the thickest forest, when his eyes are of little use to him, and pursue his insect prey without touching any part of a trunk or branch of a tree.

Those wings are made up of a close network of fine nerves which seem to be able to detect in advance the slightest vibration in the atmosphere caused by the friction of air currents against solid objects.

Because bats have wings, they used to be classed with birds. But bats are not birds—they are mammals because they bring forth their two or three baby bats alive, and nurse them with milk from the mother bat.

The young bat is at first very tiny, naked, and pink, but it clings vigorously to its mother's breast as she darts through the air. When at rest, the mother bat folds her delicate wings around her baby to keep it warm.

Bats do not alight on the ground if they can avoid it, for they crawl with great difficulty. They cannot spring into the air from a flat surface, but must climb up a little distance in order to launch themselves so they can fly.

There are altogether about 300 kinds of bats, distributed all over the world except in the very coldest regions. Usually bats are small, but some of the bats in Malay countries and in the Philippines have a spread of wings measuring five feet. These and other large bats found in the tropics are fruit eaters; these bats are really harmful.

But, as previously stated, most bats feed on insects, and are very valuable to man. Indeed, the bat may be looked

upon as the night policeman of our gardens and groves, for it devours enormous quantities of harmful insects.

Children should not destroy the little bats, which, in spite of their strange appearance and harsh, squeaking voices, are friendly and easily tamed if carefully approached.

Bats have always had an undeserved bad reputation. This is not true of most bats, especially of the little ones which we often see flying about in the evening. But the Philippine fruit bats are injurious.

There is also another kind of injurious bat. It is found in Africa, Central and South America, and elsewhere. This is the tropical vampire bat which settles on horses and cows or even sleeping human beings and sucks their blood, sometimes so weakening the victim that death results.

These bloodsucking bats get their name of vampire from the "vampire" of legend

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This is a fruit bat carrying her baby, which clings to her fur, hanging upside down just as its mother does.

WAGNER

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and another is known as *The Mastersinger*. There were knightly singers who wandered about Germany during the Middle Ages. Sometimes these singers met in contests to decide who was the best singer. An artist has painted an imaginary scene representing a contest of these *minnesingers*, as they were called. A copy of this picture is shown on page 421.

After years of exile, Wagner was permitted to return to Germany. With considerable difficulty he built a theater in the little city of Bayreuth (pronounced high-roit). He called this theater his Festival Playhouse, and it has become very famous. It took a long time to get it built, but at last it was finished. Wagner had fulfilled his dream of the union of arts in the creation of the music-drama and the Festival Playhouse.

The last opera which Wagner wrote was *Parsifal* which tells of a knight named *Parsifal* and his deeds. This was completed in 1882. Failing health caused Wagner to spend the following winter at Venice, where, in 1883, he suddenly died. He was buried at Bayreuth, at

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—ghosts that come out of their graves at night, according to superstition, and suck the blood of human beings. Of course, this belief is only a superstition—most certainly it is not true.

There are thousands and thousands of bats in the Philippines which help and benefit the Filipinos. Have you ever seen thoughtless Filipino boys stoning or killing a bat? Do you think they should do that? Certainly not. We should protect the bats, for that is the only way we can repay them for their good work.

which place his famous theater is still in use.

REVIEW

1. Tell of Richard Wagner as a boy.
2. Tell of his early study of music.
3. When he was a young man what did he do in music?
4. Why did Wagner have to leave his country?
5. What did Wagner call his musical plays?
6. What stories did he use in his series known as *The Ring of the Nibelungs*?
7. Name the four music-dramas of this series.
8. Have you ever heard any of Wagner's music?

COLLECTING BUTTERFLIES

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ly. Then I arrange them in my display case. I fasten each specimen securely in place by sticking a pin through it.

My mother admires my collection very much. So do many of my friends, and some of them have gone into the business of collecting moths and butterflies for themselves.

I took my collection to school where it was on display. My teacher showed it to other teachers and pupils and the visitors who came to our school.

Any one living here in the Philippines can make a good collection of moths and butterflies. There are plenty of specimens here.

BOOK ADVENTURE

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A sinking ship, a desolate cry,
Tell of men who soon will die;
The pirates now have gained the top.
Hurry! Can no man make them stop?
One man left to save the ship!
One man left! He must not slip.
Far into the night so late,
I read to learn this one man's fate.