

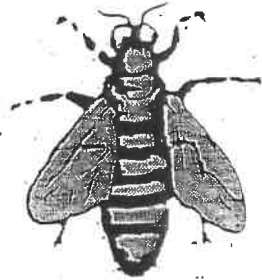
THE THINGS WINGS DO

Did you think that insects only use their wings to fly? Read this article by Keith Waddington to find out some interesting facts about other ways wings can be useful.

INSECT WINGS have many different shapes and colors. They also have different uses.

Most insects have two pairs of wings, with one pair behind the other. These wings are used for flying, of course. But wings can help an insect in other ways, too.

FLYING

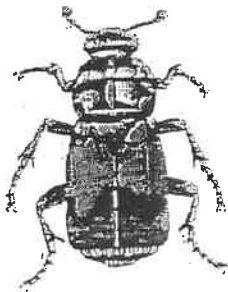


How fast can an insect fly? That depends on the size and speed of the wings. Houseflies can go fast because they have small wings that flap quickly.

The same is true for honeybees. A honeybee can flap its small wings 225 times each second, and it can fly fourteen miles an hour. That's fast for an insect.

But butterflies drift from flower to flower. They flap their broad wings slowly. Sometimes they glide without flapping at all. These big wings could break if the butterfly flapped as hard as a bee does.

HARD COVERINGS



Wings are not just for flying. In fact, a beetle's front wings are not for flying at all. These two wings are hard. When the beetle rests or walks, they cover its soft body like two pieces of nutshell. These wings help protect the beetle from being eaten by birds.

When the beetle flies, it holds its front wings out to the sides. With these hard wings out of the way, the beetle can fly with its small back wings.

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COLORS FOR HIDING



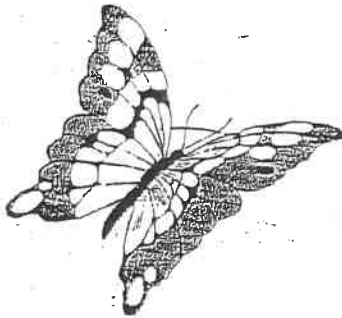
Some wings have colors and patterns that make the insect hard to see.

These wings look like the places where the insect rests. When the creature holds still, it doesn't look like an insect. It looks like a leaf or stone or piece of bark. The colors help the insect hide from animals that might eat it. This kind of coloring is called camouflage.

Grasshoppers have camouflage. When they sit on plants, their wings look like the leaves around them.

Some moths have wings with camouflage that looks like tree bark. They can rest on trees without being found.

BRIGHT COLORS



Some insects don't hide at all. Instead, their wings have bright colors that can be seen from far away.

Scientists say these wings have warning colors because the colors warn birds that the insects are not good to eat.

The wings of the monarch butterfly have warning colors of bright orange with black. A bird might eat one of these butterflies. But after the bad taste of that meal, the colors warn the bird not to eat another one.

Most people think wings are just for flying. I tell them about these amazing uses.

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Where would you most likely find this article?

- A. In a magazine about science
- B. In a book of short stories
- C. In a book of fairy tales
- D. In a book of poems about animals

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What is the main use for a beetle's front wings?

- A. They help the beetle to fly.
- B. They protect the beetle from birds.
- C. They make the beetle hard to see.
- D. Their color warns birds to stay away.

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Which of the following sentences is an opinion, not a fact?

- A. Most people think wings are just for flying.
- B. When the beetle flies, it holds its front wings out to the side.
- C. Insect wings have many different shapes and colors.
- D. The colors help the insect hide from animals that might eat it.

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Based on what you have read, which of the following insects do you think would fly the fastest?

- A. Grasshoppers
- B. Moths
- C. Butterflies
- D. Honeybees

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Warning colors protect some insects by

- A. showing birds the insects are not good to eat.
- B. showing birds the insects are beautiful.
- C. making the insects look like a stone or piece of bark.
- D. making the insects give off a bad smell.

▼ Reading and Literature

ELLA'S FRIENDS

This is a story about Ella, an elephant who is always kind and helpful to the other animals. Read what happens when Ella becomes sick.

ELLA, AN ELEPHANT, walked through the grass while two egrets, which are white birds, sat on her back. As she walked through the grass, she stirred up bugs which the egrets ate. The egrets loved Ella, and so did all the other animals. Ella was good and kind and helpful.

When danger was near, Ella would use her long trunk like a trumpet to warn the rest of the animals. And even though her own young elephants were grown, Ella still took her turn looking after a group of young elephants.

One day, as Ella walked through the tall grass with the egrets on her back, the egrets noticed that Ella walked slower and breathed harder than usual. "What's wrong, Ella?" they asked. "You act as if you do not feel well."

"I'm tired," said Ella. "I'm just very, very tired."

"You worked too hard yesterday moving all those dead tree stumps with your long tusks," the egrets said. "You should go home and rest."

"Maybe you are right," Ella said. So the egrets flew off and Ella went to lie under a tree.

When Ella awoke, she felt worse than before she lay down. She was so weak she could not get up. The egrets saw her. One flew to her while the other flew to get help.

"Ella!" the first egret yelled. "Just lie down. My friend has gone to get help."

"Oh," Ella said, "I hate to be such trouble."

The first egret flew down by Ella's head and stroked it with his wing. "You are no trouble, Ella," he said. "You are no trouble at all."

Reading and Literature ▼

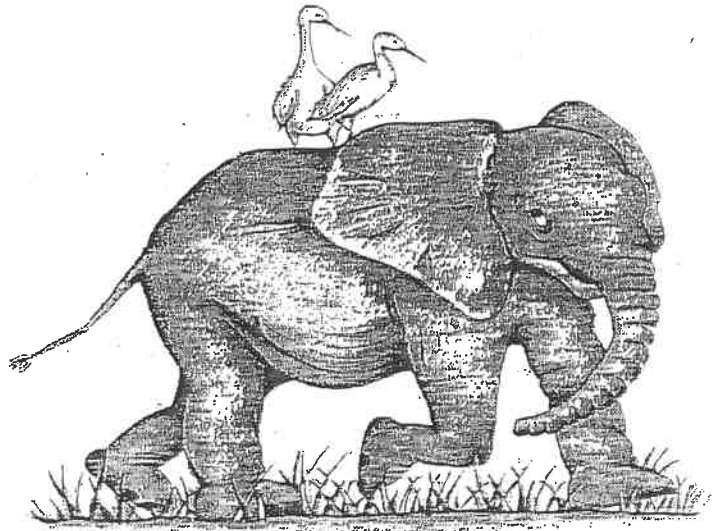
Soon the second egret came with many of the other animals. "Oh, Ella!" the other animals said. "What can we do to help you?"

Before Ella could say anything, one of the elephants took charge. She sent the young elephants to get water for Ella. She told the egrets to fetch a special plant to help Ella feel better. The rest of the elephants stood around Ella. Many of them wrapped trunks with Ella, which is the way elephants hug.

Ella ate the plant the egrets brought and drank the water from the young elephants. She slept the rest of the afternoon and all that night while the animals watched over her. The next morning, when Ella awoke, she got to her feet. The elephants cleared the way. The egrets flew around Ella while she walked.

"Ella! Ella! Are you okay?" the egrets asked.

"Oh, I will be fine," Ella said, "as long as I know I can always count on my friends."



▼ Reading and Literature

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What is an egret?

- A. A bug
- B. A bird
- C. A plant
- D. An elephant

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The special plant in the story is MOST like

- A. a bed.
- B. a trumpet.
- C. some feathers.
- D. some medicine.

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At the end of the story the animals are happy because

- A. Ella feels better.
- B. Ella goes to sleep.
- C. Ella is moving trees.
- D. Ella is eating insects.

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The setting for this story is in

- A. a zoo.
- B. a river.
- C. a jungle.
- D. a house.

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What kind of story is this most like?

- A. A fable
- B. A poem
- C. A history story
- D. A mystery story